

INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

U·M·I

University Microfilms International
A Bell & Howell Information Company
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
313/761-4700 800/521-0600

Order Number 9322659

**Comparison of the relationship of academic success to
self-concept, social acceptance and perceived social acceptance
for hearing, hard of hearing and deaf adolescents in a
mainstream setting**

Coyner, Lisa Sharon, Ph.D.

The University of Arizona, 1993

U·M·I

300 N. Zeeb Rd.
Ann Arbor, MI 48106

COMPARISON OF THE RELATIONSHIP OF ACADEMIC SUCCESS TO
SELF-CONCEPT, SOCIAL ACCEPTANCE AND PERCEIVED SOCIAL
ACCEPTANCE FOR HEARING, HARD OF HEARING AND DEAF
ADOLESCENTS IN A MAINSTREAM SETTING

by

Lisa Sharon Coyner

A Dissertation Submitted to the Faculty of the
DEPARTMENT OF SPECIAL EDUCATION AND REHABILITATION
In Partial Fulfillment of the Requirements
For the Degree of
DOCTOR OF PHILOSOPHY
WITH A MAJOR IN SPECIAL EDUCATION AND REHABILITATION
In the Graduate College
THE UNIVERSITY OF ARIZONA

1 9 9 3

THE UNIVERSITY OF ARIZONA
GRADUATE COLLEGE

2

As members of the Final Examination Committee, we certify that we have read the dissertation prepared by Lisa Sharon Coyner entitled Comparison of the Relationship of Academic Success to Self-Concept, Social Acceptance and Perceived Social Acceptance for Hearing, Hard of Hearing and Deaf Adolescents in a Mainstream Setting

and recommend that it be accepted as fulfilling the dissertation requirement for the Degree of Doctor of Philosophy

Nancy Eldredge
Nancy Eldredge, Ph.D.

3-26-93
Date

S. Mae Smith
S. Mae Smith, Ed.D.

3-26-93
Date

James Organist
James Organist, Ph.D.

3-26-93
Date

Lawrence Aleamoni
Lawrence Aleamoni, Ph.D.

3/26/93
Date

Date

Final approval and acceptance of this dissertation is contingent upon the candidate's submission of the final copy of the dissertation to the Graduate College.

I hereby certify that I have read this dissertation prepared under my direction and recommend that it be accepted as fulfilling the dissertation requirement.

Nancy Eldredge
Dissertation Director

4-10-93
Date

STATEMENT BY AUTHOR

This dissertation has been submitted in partial fulfillment of requirements for an advanced degree at The University of Arizona and is deposited in the University Library to be made available to borrowers under rules of the Library.

Brief quotations from this dissertation are allowable without special permission, provided that accurate acknowledgment of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the head of the major department or the Dean of the Graduate College when in his or her judgment the proposed use of the material is in the interests of scholarship. In all other instances, however, permission must be obtained from the author.

SIGNED: Steve S. Coyne

ACKNOWLEDGMENTS

The completion of this dissertation would not have been possible without the support and assistance of my family, friends, and committee. I would like to thank the teachers and students who participated in this study. I would also like to thank the following individuals.

To Dr. Paula Ripps for her assistance, patience and unwavering support throughout my doctoral program, but especially during this undertaking. Also, for leading the way and identifying potential stumbling blocks.

To Dr. Mark Borgstrom for his sense of humor, tolerance, and statistical expertise, without his knowledge and assistance I might still be analyzing my data.

To Dr. Lawrence Aleamoni for his encouragement, confidence, and assistance. His guidance and support facilitated my completion of the doctoral program as well as this project.

To Dr. James Organist for his kind words, encouragement, and sense of humor. His positive attitude helped me to maintain perspective during this process.

To Dr. S. Mae Smith for her support, assistance, and ability to motivate me. Her depth of knowledge of the field of rehabilitation psychology provided a solid perspective.

To Dr. Nancy Eldredge for her guidance, enthusiasm, and confidence in me. Her contributions to my education, as a person and a rehabilitation psychologist, are innumerable.

DEDICATION

This dissertation is dedicated to my family. To my brother, Marc, for his undying love and support throughout my life, but especially during my graduate program; to my father, Mike, for his words of wisdom and encouragement; to my dad, Tom, for always being there and believing in me; and to my mom, Judith, for her, guidance, support, tolerance, encouragement, unconditional love, and for being a model I could emulate.

TABLE OF CONTENTS

	Page
LIST OF ILLUSTRATIONS.....	9
LIST OF TABLES.....	10
ABSTRACT.....	11
1. INTRODUCTION.....	12
Introductory Statement.....	12
Background of Problem.....	12
Statement of Problem.....	16
Need for the Study.....	16
Research Questions.....	18
Limitations of Study.....	19
Definition of Terms.....	19
Summary.....	20
2. REVIEW OF LITERATURE.....	22
Introductory Statement.....	22
Studies Related to Self-Concept.....	22
Development of Self-Concept for Hard of Hearing and Deaf Adolescents.....	28
Studies Related to Social Acceptance.....	31
Socialization.....	31
Peer Acceptance.....	32
Social Acceptance for Hard of Hearing and Deaf Adolescents.....	35
Studies Related to Academic Success.....	39
Summary.....	40
3. METHODOLOGY.....	43
Introductory Statement.....	43
The Sample.....	43
Protection of Human Subjects.....	44

TABLE OF CONTENTS--Continued

	Page
The Setting.....	44
Assessments.....	44
Teacher Survey.....	44
Vineland Adaptive Behavior Scale - Classroom Edition.....	45
Piers-Harris Children's Self-Concept Scale - Adapted.....	46
Peer Rating Scale - Adapted.....	47
Student Activity Questionnaire.....	48
Data Collection.....	49
Data Analysis.....	52
Research Question 1.....	52
Research Question 2.....	53
Research Question 3.....	53
Research Question 4.....	53
Research Question 5.....	53
Research Question 6.....	53
Summary.....	54
 4. RESULTS OF DATA ANALYSIS.....	 55
Introductory Statement.....	55
Description of the Subjects.....	55
Reliability Analysis.....	58
Analyses of Research Questions.....	62
Research Question 1.....	62
Research Question 2.....	64
Research Question 3.....	76
Research Question 4.....	77
Research Question 5.....	77
Research Question 6.....	79
Summary.....	80

TABLE OF CONTENTS--Continued

	Page
5. DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS.....	83
Introductory Statement.....	83
Discussion.....	83
Research Question 1.....	83
Research Question 2.....	84
Research Question 3.....	86
Research Question 4.....	86
Research Question 5.....	87
Research Question 6.....	88
Conclusions.....	89
Implications.....	90
Limitations.....	92
Recommendations for Future Research.....	92
Summary.....	93
APPENDIX A: HUMAN SUBJECT COMMITTEE APPROVAL.....	94
APPENDIX B: LETTER OF PERMISSION.....	96
APPENDIX C: PERMISSION TO PARTICIPATE.....	98
APPENDIX D: PARENT PERMISSION FORMS.....	100
APPENDIX E: PERMISSION FORM FOR STUDENTS WITH HEARING IMPAIRMENTS.....	102
APPENDIX F: PERMISSION FORM FOR HEARING STUDENTS....	104
APPENDIX G: TEACHER SURVEY.....	106
APPENDIX H: SELF-CONCEPT MEASURE.....	109
APPENDIX I: PEER RATING SCALE.....	112
APPENDIX J: STUDENT ACTIVITY QUESTIONNAIRE.....	117
REFERENCES.....	127

LIST OF ILLUSTRATIONS

	Page
FIGURE 1 Correlation of teachers' subjective ratings of student performance and hearing students' grade point averages.....	59
FIGURE 2 Correlation of teachers' subjective ratings of student performance and hard of hearing students' grade point averages.....	60
FIGURE 3 Correlation of teachers' subjective ratings of student performance and deaf students' grade point averages.....	61
FIGURE 4 Average ratings by hearing students using the Peer Rating Scale.....	66
FIGURE 5 Mean peer rating scores for male students using the Peer Rating Scale.....	71
FIGURE 6 Mean peer rating scores for female students using the Peer Rating Scale.....	72
FIGURE 7 Mean peer rating scores for all students using the Peer Rating Scale.....	73
FIGURE 8 Description of the social acceptance ratings for same and different hearing status peers using the Peer Rating Scale.....	75

LIST OF TABLES

	Page
TABLE 1 Demographic data on sample age by gender by hearing status.....	57
TABLE 2 Mean peer ratings for male hearing students.....	67
TABLE 3 Mean peer ratings for male hard of hearing and deaf students.....	68
TABLE 4 Mean peer ratings for female hearing students.....	69
TABLE 5 Mean peer ratings for female hard of hearing and deaf students.....	70

ABSTRACT

This study investigated three constructs hypothesized to contribute to deaf and hard of hearing students' success in mainstream settings: self-concept, social acceptance, and perceived social acceptance. Twenty-five hearing, five deaf and five hard of hearing junior high school students participated in this study. Students completed three measures: Piers-Harris Self-Concept Scale, Form A (Adapted), Peer Rating Scale, and Student Activity Questionnaire (Adapted). The results indicated that hard of hearing and deaf students' self-concepts and their perceptions of their social acceptance were not significantly different from their hearing peers' self-evaluations. Hard of hearing and deaf students' self-concepts were found to be inversely related to the peer acceptance rating they received from their hard of hearing and deaf peers. The best predictor of academic success for hard of hearing and deaf students was the peer acceptance rating they received from hearing students. Consequently, hard of hearing and deaf students' success in a mainstream program may be influenced by their social acceptance among hearing peers. Recommendations for increasing social acceptance in the mainstream setting were presented.

CHAPTER ONE

INTRODUCTION

Introductory Statement

In this chapter the research problem, questions, hypotheses, and the significance of this study will be presented. The need for the study as well as the limitations of the research are considered. In addition, specific terminology to be used in this study will be operationally defined.

Background of Problem

As a result of Public Law 94-142 there was a notable increase in the number of children with hearing impairments placed in regular education programs. Moores (1987) reported that after the passage of PL 94-142 there was an increase of 107 programs and 6,384 hard of hearing and deaf students in public schools. Public school enrollments for hard of hearing and deaf students from 1974 to 1984 increased 29.8% compared to a 18.3% decrease in public residential schools (Moores, 1987).

Since the implementation of this law, there has been debate and conflicting reports from researchers relating to the success of hard of hearing and deaf children in mainstream settings. The majority of these research

studies have focused on a traditional measure of success, i.e., academic competence (Brackett & Maxon, 1986; Davis, Shepard, Stelmachowicz, & Gorga, 1981). Maxon, Brackett and van den Berg (1991) in their review of the literature found that "...the few studies that have examined mainstreamed hearing-impaired children...have for the most part ignored social adjustment issues, such as behavioral appropriateness, self-esteem, or social integration" (p. 7).

A study by Davis (1986) identified five factors which contributed to the success of children with hearing impairments in a mainstream program: "...(1) good oral communication skills, (2) strong parental support, (3) average or higher intelligence, (4) personality factors (such as self-confidence), and (5) adequate support services" (p. 218). Davis' study and the research conducted by Maxon and Brackett (1987) suggest that a child's success in any program will be influenced by his/her individual characteristics as well as the specific educational program he/she is attending.

Dengerink and Porter (1984) examined hearing students evaluations of their hard of hearing and deaf peers. They found that hearing children gave significant negative ratings to peers wearing hearing aids. They concluded that peer attitudes should be a consideration in mainstreaming. The findings of the aforementioned researchers indicate that there are a number of factors that

may affect a child's success in a mainstream program: 1. individual characteristics; 2. the specific educational program; and 3. peer attitudes.

Davis, Shepard, Stelmacowicz and Gorga (1981) suggested that educational planning in mainstream settings for deaf and hard of hearing children should include assessment of "...social maturity and peer acceptance" (p. 136). They stated, however, that there is a lack of appropriate measures to assess these qualities for deaf and hard of hearing children in regular education placements. Because of the absence of assessments and the limited data, choices about educational placement "...are often made on the basis of common sense, personal preference, parental wishes, or administrative constraints" (Davis, 1986, p. 218). One might infer from these findings that placement of deaf and hard of hearing children in mainstreamed settings has been based on opinions rather than objective measures. The inappropriate placement of a hard of hearing or deaf student into a mainstream program may be due to inadequate measures or the unsuitable implementation of these measures in assessing specific personality characteristics and peer acceptance.

Parker and Asher (1987) found that self-perceptions of social relationships along with judgments of individuals by their peers was one way of assessing the quality of social relationships. Researchers have found with hearing children that self-perceptions are related to the extent of actual peer rejection (Asher, Parkhurst, Hymel & Williams, 1991). Stinson, Whitmire-Chase

and Kluwin (1990) studied self-perceptions of social relationships of deaf and hard of hearing adolescents. They proposed that the study of these self-perceptions might help identify particular educational settings in which hard of hearing and deaf students are more or less likely to enjoy peer acceptance. One assumption that might be made from these findings is that a child's perception of his/her social acceptance might influence his/her success in a program. That is, if children are able to identify their own level of acceptance or rejection by peers they may be receptive to learning new skills that would influence their level of social acceptance, and in turn possibly increase their success in the mainstream setting.

Given that personality factors, peer ratings of social acceptance and self ratings of social acceptance might influence a child's success or failure in an academic setting, it appears that along with academic competence, a deaf or hard of hearing child's self-concept, his/her acceptance by peers and his/her perceived social acceptance should be included in the formula for making a decision about an appropriate educational placement. The purpose of this study is to identify factors that might contribute to or detract from social competence. This knowledge in turn may lead to an understanding of what is needed for a successful academic placement.

Statement of the Problem

This study was designed to investigate two constructs that have been hypothesized to contribute to a child's success in a mainstream setting: self-concept and social acceptance. First, this study was designed to determine the degree of relationship between self-concept and social acceptance by peers, and second, to discern if the relationship was different for children with hearing impairments as compared to their normally hearing peers. The final component in this investigation was to ascertain if children with hearing impairments' predictions of their social acceptance was different from their hearing peers' predictions.

The examination of these relationships was intended to clarify how deaf, hard of hearing, and hearing adolescents feel about themselves as well as how these students were viewed by their peers at school. This information may assist administrators, teachers, and parents in making improved placement decisions and interventions, which could lead to the enhancement of a child's success in an educational setting.

Need for the Study

As was previously stated there has been limited research conducted with hard of hearing and deaf children, specifically adolescents, in mainstream settings. Davis (1986) reported that hard of hearing and deaf adolescents often experience difficulty in social relationships. Foster (1988) interviewed 15

students with hearing impairments and found that their descriptions of their mainstream experiences included terms such as loneliness, rejection, and social isolation. Mertens (1989) found that students who attended a residential school reported more positive social experiences than those who had been in mainstream programs.

Although these findings present a pessimistic view of mainstreaming, there have been a few studies in which mainstreamed students had positive social experiences. Ladd, Munson and Miller (1984) found that when special attempts were made to institute an environment that supported positive peer interactions between students with hearing impairments and their normally hearing peers, positive interactions and friendships developed. In addition, Mertens (1986) reported that she did not find consistent differences between the social development of deaf and hard of hearing students who attended some mainstream classes when compared to their peers who were always in self-contained classes.

The preceding studies demonstrate the variation in hard of hearing and deaf children's social experiences. Given the social difficulties encountered by many of these students, further specification of the factors that account for this variation may be beneficial in the development and implementation of intervention strategies.

Research Questions

The research questions addressed in this study are:

1. What is the relationship between social acceptance and self-concept?
2. If there is a difference in social acceptance for hearing students and their hard of hearing and deaf peers, what is the difference?
3. If there is a difference in self-concept for hearing students when compared to their hard of hearing and deaf peers, what is the difference?
4. Are hearing students' perceptions of their social acceptance different from their hard of hearing and deaf peers perceptions of their social acceptance?
5. What is the best predictor for social acceptance for hearing students and deaf and hard of hearing students?
6. What independent or demographic variable or combination of variables contributes the most to the prediction of academic success?

Limitations of the Study

The study was restricted to a suburban junior high school in the Southwest. The sample in this study was small N=35, 25 hearing students and 10 hard of hearing and deaf students.

Definition of Terms

1. social acceptance -

"...operationally defined as the average of all ratings received from classmates on peer-rating scales" (Asher & Taylor, 1981, p. 16)

2. self-concept -

"...is defined as a relatively stable set of self-attitudes reflecting both a description and an evaluation of one's own behavior and attributes" (Piers, 1984, p. 1).

3. perceived social acceptance -

"...pertains to appraisals of the extent to which (a) one has the skills and personal characteristics to establish good peer relationships, such as "being willing to talk or sign in groups", and (b) one has successfully established peer relationships, such as "having a lot of friends". Individuals who assign positive evaluations on items tapping these domains are assumed to evaluate their social selves favorably" (Stinson, Kluwin & Whitmire-Chase, 1990, pp. 5-7).

4. hard of hearing person -
"...one whose hearing is disabled to an extent (usually 35-69 dB ISO) that makes difficult, but does not preclude, the understanding of speech through the ear alone, without or with a hearing aid"
(Moore, 1987, p. 9).
5. deaf -
"...one whose hearing is disabled to an extent (usually 70 dB ISO or greater) that precludes the understanding of speech through the ear alone, with or without the use of a hearing aid" (Moore, 1987, p. 9).
6. mainstreaming -
"...movement from traditional separate residential schools toward the enrollment of hearing impaired children in local public schools...(Moore & Kluwin, 1986, p.105).
7. academic success -
was defined as grade point average in this study.

Summary

This study was designed to investigate the factors that were most predictive of academic success in both hard of hearing and deaf adolescents as compared to their normally hearing peers. Self-concept, social acceptance, and one's perceived social acceptance were three constructs that were measured.

The strength of these relationships to each other as well as their differential strengths when compared across hearing status were explored.

The terms and concepts used in this study were defined. Limitations underlying this study were presented.

CHAPTER TWO

REVIEW OF LITERATURE

Introductory Statement

This chapter will review the literature pertinent to this study. First, a general review of the literature related to self-concept will be presented. Next, research specific to deaf and hard of hearing adolescents will be examined in relation to self-concept. In the following segment a review of the literature on social acceptance and perceived social acceptance will be provided, concluding with a presentation of the research specific to deaf and hard of hearing adolescents, and their perceived and actual acceptance by peers. The final body of literature to be presented will address the relationships of the aforementioned constructs (i.e., self-concept, social acceptance, and perceived social acceptance) to academic success.

Studies Related to Self-Concept

Self-concept, also described in the literature as self-esteem or self regard (Piers, 1987), has been the focus of research for at least 100 years. A number of theories and speculations about the construct of self-concept have been put forth in the literature. However, many have not been subjected to critical

empirical analysis and investigation. As a result, several hypotheses regarding the conditions that produce and affect feelings of confidence, excellence, and optimism have been developed, but there is little basis for determining their validity or for selecting among contrary claims. This first section will be devoted to presenting a historical perspective of identifying the general conditions that researchers have hypothesized as being related to the development of a positive self-concept.

James (1890) discussed three possible influences upon self-esteem. He believed that human aspirations and values have an essential role in determining whether an individual regards him/herself favorably. What one achieves is weighed against one's aspirations for any given aspect of behavior. If an individual's achievements approach or meet his/her aspirations in a valued area, then he/she should have high self-esteem; if, however, a discrepancy exists, then his/her self-regard is low.

Sullivan (1947) believed that each person is constantly defending against a loss of self-esteem, with each loss producing feelings of anguish often called anxiety. He postulated that anxiety occurs when an individual expects to be or is rejected by others. Sullivan also discussed how individuals learn to decrease or deflect threats to their self-esteem. People learn to cope with these threats in different ways and to varying degrees. The ability to minimize or avoid loss of self-esteem is important in maintaining a relatively high, acceptable level of

esteem. Although Sullivan did not discuss how one develops this ability, he did suggest that early familial experiences can play an important role. He believed that an individual's relationship with his/her parents, and his/her ability to minimize menacing encounters, were major contributors to the development of self-esteem.

Horney (1950) also addressed interpersonal processes and ways of fending off self-deprecating feelings. She presented a wide range of factors that might produce feelings of helplessness and isolation. She believed that these feelings, which she termed "basic anxiety", greatly contribute to unhappiness and reduce personal effectiveness. The conditions that she believed produce anxiety include: domination, indifference, lack of warmth, isolation and discrimination. She conceded that the list of specific factors could be endless, however, "...the common antecedent of all these conditions is a disturbance in the relationship between parent and child, which is generally associated with parental egocentricity" (Horney, 1950, p. 48). Horney speculated that one method of coping with anxiety is to form an idealized image of one's capacities and goals. This ideal can result in the strengthening of self-esteem, or to disappointment when unrealistic levels are not achieved. The idealized image plays an important role in self-evaluation, which differs from the ideal of aspiration noted by James. The idealized image (Horney) stems from

negative feelings, whereas aspirations (James) may arise from either positive or negative sources.

Adler (1956) stressed the importance of actual weaknesses and infirmities in producing low self-esteem. He identified three antecedent conditions which could cause negative results in the development of self-esteem. The first is organ inferiorities, and differences in size and strength. An individual has no control over what he/she possesses at birth. However, one might become motivated to change his/her appearance, e.g., by lifting weights, which could in turn lead to a more positive self-concept. Whether one transforms what appears to be an inferiority into a strength depends for the most part on the acceptance, support, and encouragement of parents and friends. These experiences represent the second major antecedent condition. If children with inferiorities receive acceptance and support, they can compensate for their weaknesses and turn them into strengths. Without this support they become discouraged and embittered. Although Adler believed in the beneficial effects of support and acceptance, he warned against the destructive effects of overindulgence, the third antecedent. He believed that pampered children develop an unrealistically inflated value of their worth.

Erikson (1968) discussed the relationship between self-esteem and identity. "The degree to which one appraises his or her behaviors in a positive or negative manner is believed to affect one's personal sense of identity and

the self-image projected to others" (p. 67). Erikson believed this occurred during adolescence; the stage he termed identity versus role confusion. The adolescent during this stage of identity formation is likely to suffer more than at any other time from a confusion of roles. "This state can cause one to feel isolated, empty, anxious, and indecisive" (Erikson, 1968, p. 68). According to Erikson, adolescents worry about how others view them, and are apt to frequently display self-consciousness and embarrassment.

Coopersmith (1981) in his book Antecedents of Self-Esteem listed four major factors contributing to the development of self-esteem:

1. The amount of respectful, accepting and concerned treatment that an individual receives from the significant others in his life.
2. One's history of successes and the status and position one holds in the world.
3. How one's experiences are interpreted and modified in accord with the individual's values and aspirations.
4. How the individual responds to devaluation (p. 37).

Each of the foregoing theorists emphasized slightly different components as being most important in the development of a positive self-concept. James (1890) focused on the value one places on achieving his/her goals in a specific arena. Sullivan (1947) theorized that an individual's self-esteem is based on

how he/she perceives others, especially parents, feel about him/her. Horney (1950) also believed in the influence of others on one's self-esteem; she believed that the precursor to "basic anxiety" in an individual is a disruption in the relationship with his/her parent. Adler (1956) posited that although individuals had no control over what they were given at birth, how an individual uses what one received, as well as one's relationship with family and friends, would influence the development of one's self-concept. Erikson (1968) postulated that adolescence was one of the most confusing, and possibly the most difficult stage an individual would encounter in his/her lifetime. During this stage individuals begin to rely less on familial opinions, and more on judgments made by the peer group. The final theorist presented was Coopersmith (1981). His outline of the important factors which contribute to self-esteem included four premises put forth by the previous researchers: a. how one is treated by important people in one's life; b. one's successes in life; c. how one interprets and modifies one's experiences to fit with one's values and aspirations; and d. how one handles devaluation by others.

Given the framework presented by the self-esteem theorists, an important consideration in this study in investigating the development of self-concept in adolescents was to understand what they value about themselves and their world, how they viewed themselves, how they were seen by their peers, and finally, how they coped with others' opinions of them.

Development of Self-Concept for Hard of Hearing and Deaf Adolescents

The acquisition of language is both theoretically and practically important in the development of one's self-concept. Cooley (1922) stated that language, as it relates to the development of the self, is central to the sociological concept of symbolic interaction. Schlesinger and Meadow (1972) added the idea that an individual is a human being only to the extent that "...he can see himself as others see him and then act toward himself from the perspective of knowing, or imagining from prior cues, what their reactions to his acts may be" (Schlesinger and Meadow, 1972, p. 133). Meadow (1980) believed that social development and self-concept cannot be separated. "As a child begins to be an object to himself and sees himself reflected in the appraisals of others, he begins to understand both their behavior and his own" (Meadow, 1980, p. 86). The importance of the development of self-boundaries, characterizing oneself as having an identity separate from that of others, is a basic psychoanalytic concept. Although there is general agreement among behavioral scientists that the concept of identity is of great significance and that a positive self-concept is essential to mental health, there is no consensus about how to define, study or measure this construct. When studying deaf and hard of hearing children, the problems of definition, interpretation and research methodology are compounded.

Several researchers have compared the self-concept of deaf and hard of hearing children in residential settings with that of hearing children. Brunschwig (1936) used a sentence completion test to gather data on the self-image of deaf and hearing children. However, Brunschwig's technique of using a paper and pencil test was criticized for use with profoundly deaf children (Titus, 1965; Meadow, 1969). Craig (1965) used drawings to extract sociometric choice data from which she inferred self-evaluations. Gillies (1968) gathered drawings of the child and of another person and interpreted them for a self-image rating. All three of these researchers concluded that the hard of hearing or deaf children rated themselves much more positively than the hearing children with whom they were compared. The studies by Brunschwig, Craig, and Gillies did not explore the possible significance of peer acceptance nor did they investigate differences in educational placements, when assessing a child's self-concept. Also, these findings appear to be at odds with some of the aforementioned theorists' ideas. That is, one would not expect that deaf and hard of hearing students would rate themselves more favorably than their hearing peers given what Adler (1956) presented regarding organ inferiorities. However, if, as Adler suggested, children with inferiorities receive acceptance and support they may compensate for their weaknesses and in turn feel good about themselves.

Schlesinger and Meadow (1972) studied teacher ratings of the psychosocial adjustment of students in public school programs (oral/aural communication only) with hearing parents and residential students (both oral and sign language) with either deaf or hearing parents. Residential students of deaf parents scored significantly higher on ratings of maturity, independence and adjustment to deafness, than either residential students of hearing parents or their public school counterparts. However, public school students scored higher than their residential peers with hearing parents on measures of maturity and independence. The public school students scored lowest on adjustment to deafness. Schlesinger and Meadow concluded that the most important variable in children's psychosocial development may be the parent's hearing status, but that living with deaf peers in a residential setting was important for adjustment to deafness. However, they also pointed out that the more isolated residential environment may promote lower levels of maturity and independence when compared to children living at home and attending public schools. Meadow (1980) stated that an important issue from the study of 1972 was that children in public schools may be more frequently confronted with their minority status and as they grow older this may have a detrimental effect on their self-concept. Although Meadow (1980) posited that awareness of minority status might have an impact on how one feels about him/herself, she did not address the influence actual peer acceptance or rejection might have on one's self-concept.

Studies Related to Social Acceptance

Socialization

The socialization process of the deaf child may be different from his/her hearing peers depending upon the communication skills of the child, the family, and the school setting. For the deaf child, school may surpass the family as the primary socializer, because many family members lack the basic communication skills to be able to share their lives, hopes, and dreams with their deaf child (Meadow, 1982).

Reich, Hambleton, and Houldin's (1977) study was conducted in four mainstream programs with varying levels of integration. They posited that although integration is beneficial to academic development a deaf child's social and emotional development may be negatively influenced by increased amounts of integration with hearing children. Evans (1975) conducted a survey of socialization problems with 123 deaf teens at a state residential school and 321 hearing teens in a public school setting. He found that due to the isolated nature of living in a residential environment, residential students were experientially deprived. Evans concluded that regardless of a child's mode of communication, "normal" socialization required contact with ones family and hearing peers.

Farrugia and Austin (1980) using the Meadow-Kendall Social-Emotional Inventory for Hearing-Impaired Students, compared deaf students in residential

schools to deaf students in mainstream settings. They found that the deaf students in mainstream settings scored lower than their residential school cohorts in the areas of maturity, self-esteem, social adjustment and emotional adjustment.

Peer Acceptance

Researchers' interest in children's peer relations developed out of the general curiosity of the effects of social groups on human behavior. Between 1830 and 1930, there was a large body of literature developed around two major propositions: "(1) Group experiences are among the most significant determinants of human nature and (2) social phenomena are amenable to scientific investigation (Hartup, 1983, p. 104). These propositions were debated by a number of theorists, including, Charles Cooley, George Mead, Sigmund Freud and Jean Piaget. Although their methods for data collection would not be considered stringent when compared to modern methods, they laid out most of the basic hypotheses that contemporary researchers have used in their investigations. Cooley (1909) may have given the most specific attention to the role of peer relations in child development, which related to the general effects of group experience on human behavior.

The view maintained is that human nature is not something existing separately in the individual, but a group nature or primary phase of society. It is the nature which is developed and expressed in those simple, face-to-face groups that are somewhat alike in all societies; groups of the family, the playground, and the

neighborhood. In the essential similarity of these is to be found the basis, in experience, for similar ideas and sentiments in the human mind. In these, everywhere, human nature comes into existence. Man does not have it at birth; he cannot acquire it except through fellowship, and it decays in isolation (pp. 29-30).

Cooley suggested that the child's peer group is equal with other groups for information about social norms as well as the process of socialization.

Although these suppositions were not empirically tested they were used in the field of education. "...There was an increased reliance on child-child relations in education management--on group work, cooperative activities, common study, and self-government--even in the elementary school during the 1920s and 1930s" (Hartup, 1983, p.105). However, an issue that was debated during these early years was whether groups, especially groups of children, were a legitimate object of scientific investigation. The end of these debates seems to have coincided with the advent of new and improved techniques for gathering "hard data" concerning social behavior (Cartwright & Zander, 1960).

One technique that was developed during this time was the "sociometric test" developed by Moreno (1934). Moreno began his work with adults, and his interest in sociometry was as a means of elucidating various aspects of group structure, while other researchers used this technique to assess individual differences in social acceptance and competence in children (e.g., Criswell, 1939; Jennings 1937, 1938). McConnell and Odom (1986) presented in their review of the literature on the predictive validity of sociometrics, "...sociometric

assessment as a measure of children's social relationships with peers, may help identify children who could be at risk for adjustment problems as adults" (p. 227).

Recent researchers have theorized that peer relations contribute in a distinctive manner to the development of an individual: "...in the capacity to relate to others, to the development of social controls, and to the acquisition of social values" (Hartup, 1983, p. 103). Most studies of peer relations in adolescence have focused on students in high school (e.g., Coleman, 1961; Kandel, 1978; Montemayor & Van Komen, 1980; Sherif & Sherif, 1964), and little information has been gathered on the young person initially confronting the physical, cognitive, and social changes of adolescence (Crockett, Losoff & Peterson, 1984). Hartup (1983) posited in his review of the literature that peers play a unique and important role in social development. Douvan and Adelson (1966) proposed that peers were especially important early in adolescence when boys and girls were adjusting to the physical and emotional changes associated with puberty.

Hymel (1986) proposed that the stability of peer acceptance and rejection may be at least partially a function of peer interpretations of behavior. "In other words, once the rejected child establishes a reputation among his or her peers, subsequent behavior is interpreted accordingly. Thus, social acceptance/rejection may depend on peer perceptions and interpretations of

behavior in addition to the behavior itself" (p. 432). Hymel found that positive behaviors were ascribed to more internal or personality characteristics when performed by peers who were liked rather than disliked. In contrast, negative behaviors were attributed to more internal or personality characteristics when performed by disliked peers than by liked peers. Also, greater responsibility or fault for negative behavior was ascribed to disliked peers than to liked peers. Sheare (1976) investigated the effects of sex, grade level, and cohort differences upon peer acceptance and self-concept in 436 children in grades 3 through 6 over a one-year period. Cohorts were defined as those children who entered kindergarten in the same year. Sheare also wanted to determine whether peer acceptance was significantly related to self-concept. Sheare found that older children were significantly more consistent in their peer choices and their self ratings. However, he found no significant sex differences for either peer acceptance or self-concept. Peer acceptance and self-concept were positively correlated; that is, children high in self-concept also tended to receive higher peer ratings. Sheare hypothesized that peer acceptance made a significant impact on self-concept, but self-concept did not significantly influence peer acceptance.

Social Acceptance for Hard of Hearing and Deaf Adolescents

Much of the research on the effects of mainstreaming on adolescents with hearing impairments postulated that these students often experienced

difficulties with social relationships (Davis, 1986). Greenburg and Kusche (1989) summarized several descriptive studies of interactions between children with hearing impairments and their normally hearing peers in mainstream settings when oral communication was the primary mode of communication. They inferred that children with hearing impairments appeared to have difficulty relating to hearing peers because they interacted more frequently with their teachers and other children with hearing impairments.

Ladd, Munson and Miller (1984) studied the effects of mainstreaming over time and found that deaf students were able to develop "integrated friendships" with hearing peers. However, they also learned through interviews with parents and teachers that many of these deaf students had little or no contact with hearing friends outside of school, a finding which led them to question the intensity and quality of these friendships.

Stinson, Whitmire-Chase and Kluwin (1990) studied hard of hearing and deaf adolescents self-perceptions of their social activity in a mainstream program. They investigated three sets of perceptions:

1. Participation. This referred to self-reports of frequency of activity in three areas: (a) class (e.g., helping other students), (b) school (e.g., eating lunch with friends), and (c) social (e.g., visiting a friend's house).
2. Relatedness. This emphasized the individual's appraisal of oneself and of relationships with others. Relatedness is regarded as a fundamental

psychological need "to feel securely connected to the social surround" (p. 6).

3. Perceived Social Competence. This pertained to appraisals of the extent to which (a) one has the skills and personal characteristics to establish good peer relationships, such as "being willing to talk or sign in groups", and (b) one has successfully established peer relationships, such as "having a lot of friends". Individuals who assigned positive evaluations on items tapping these domains are assumed to evaluate their social selves favorably (pp. 5-7).

The subjects in this study were 257 hard of hearing or deaf adolescents in 16 large public high schools. Students' ages ranged from 15 to 20 years old. A hearing reference group also participated in this study. Stinson, Whitmire-Chase and Kluwin (1990) found that perceived social competence was positively related to emotional security and to at least one measure of participation with both reference groups. These results supported the proposition that students who engaged in many activities, and who were emotionally secure, tended to feel confident about their social skills and relationships. The association between participation and perceived social competence was consistent with previous research with hearing adolescents which demonstrated links between participation and positive self-concept (Holland & Andre, 1987).

Stinson, Whitmire-Chase and Kluwin's (1990) overall results regarding emotional security were consistent with those regarding participation in class

and at school, in that hard of hearing and deaf classmates were preferred by deaf and hard of hearing students. In general, these results were consistent with Foster's (1989) ethnographic interviews in which she found that, hard of hearing and deaf individuals regularly turned to other hard of hearing and deaf people for "real" conversations, close friendships and a sense of belonging. Foster (1989) warned that although the overall trend was important, decisions about individual students should not be based on this research without further study.

The relationships between participation, emotional security and perceived social competence are interesting in that the degree to which a child participates could be subject to alteration. Saur, Lane, Hurley and Opton (1986) concluded that if educators want to increase feelings of acceptance and confidence in mainstreamed deaf and hard of hearing students, then one answer may be to increase participation by decreasing communication barriers with hearing students and increasing involvement in extra-curricular school activities.

The importance of peer relations in socialization has been presented and debated by several researchers. It has been hypothesized that once an individual establishes a reputation for certain behaviors, one may be accepted or rejected by peers because of these perceptions. Holland and Andre (1987) and Saur, Lane, Hurley, and Opton (1986) postulated that decreasing

communication barriers, and engaging in activities will increase a student's acceptance and confidence. Foster (1989) and Stinson, Whitmire-Chase, and Kluwin (1990) proposed that group trends seemed to indicate that hard of hearing and deaf adolescents turned to other students with hearing impairments for communication, association, and belonging. Therefore, a deaf or hard of hearing student's actual or perceived social acceptance within his/her group of hearing impaired peers in a mainstream setting may be as important as, if not more important than, his/her actual acceptance by hearing peers in the socialization process.

Studies Related to Academic Success

A number of factors have been suggested by researchers as contributing to academic success. Two studies conducted with hearing students examined the relationship of self-concept to academic achievement. Coopersmith (1967) and Gowan (1960) found that better achievers generally had more positive self-concepts. Koelle and Convey (1982) studied the relationship of self-concept and locus of control to achievement for deaf adolescents. They found that self-concept was a stronger predictor of achievement than was locus of control. "The correlations between self-concept and achievement obtained with deaf subjects were very similar to those found in studies with normal-hearing subjects, thus supporting the conclusion that, generally, better achievers have a higher self-concept than do poor achievers" (Koelle & Convey, 1982, p. 775).

Gibson-Harman and Austin (1985) stated that "self-concept is one antecedent to academic achievement, but the reverse--that academic achievement influences self-concept--also has empirical support. Therefore, the relationship is said to be reciprocal in nature, and it is affected in a complex manner by other variables as well. Koelle and Convey (1982) theorized that one such variable for a deaf child may be his/her parents' hearing status. They stated that "...researchers should be aware of the importance of parental hearing status as an intervening variable when predicting achievement outcomes of deaf adolescents" (Koelle & Convey, 1982, p. 778). Another area that may be important in a deaf or hard of hearing child's success at school may be his/her acceptance by peers (Ladd, Munson & Miller, 1984). Along with this, a child's perception of his/her acceptance by peers may also influence his/her feelings about school, which may in turn affect his/her academic performance (Stinson, Kluwin & Whitmire-Chase, 1990).

Summary

In this chapter the literature on self-concept, social acceptance, and academic success was reviewed. A historical perspective of self-concept was presented. The theorists postulated various elements as being the most significant in the formation of a positive self-concept, including achieving one's goals (James), how one thinks others feel about him/her (Sullivan; Horney), how an individual used what he/she was born with and the relationships he/she

had with family and friends (Adler), the adolescent focus on how one's peer group judges him/her (Erikson), and how one interprets and modifies one's experiences to fit with one's values and aspirations (Coopersmith).

Theorists who specifically studied the development of self-concept in deaf and hard of hearing children have encountered problems with the development of assessments as well as with the interpretation of the data.

Cooley (1909) and Hartup (1983), in his review of the literature, reported that peers perform a significant function in social development. Researchers theorized that deaf and hard of hearing adolescents often have a difficult time with social relationships. Saur, Lane, Hurley, and Opton (1986), and Holland and Andre (1987) recommended that social acceptance and self-confidence would increase if communication barriers were decreased and deaf and hard of hearing students' participation in activities increased. Foster (1989) and Stinson, Whitmire-Chase, and Kluwin (1990) theorized that deaf and hard of hearing students' acceptance by their same hearing status peers may be as germane as their acceptance by hearing peers.

Various factors have been hypothesized to contribute to academic success for hard of hearing and deaf students. Koelle and Convey (1982) found that self-concept was a better predictor of academic success than locus of control. Gibson-Harman and Austin (1985) reported that the relationship between self-concept and academic success was reciprocal. Koelle and

Convey (1982) also hypothesized that parental hearing status might be important when attempting to predict academic success. Ladd, Munson and Miller (1984) and Stinson, Whitmire-Chase and Kluwin (1990) postulated that peer acceptance and perceived social acceptance, respectively, were pertinent factors to consider when investigating academic success.

CHAPTER THREE

METHODOLOGY

Introductory Statement

This chapter describes the sample selection and setting, protection of human subjects, assessment selection, procedures, method of data collection, and data analysis for this study.

The Sample

The sample was composed of 25 hearing, 5 hard of hearing, and 5 deaf students. Students ranged in age from 13 to 17 years old. The students with hearing impairments had hearing losses in the better ear that could be categorized as mild (20db) to profound (90dB+). The hearing students were in at least one class with the identified hard of hearing or deaf student(s). All of the subjects were performing academically within one grade level of their current placement. All of the hard of hearing and deaf students were mainstreamed for at least one class per day and they had been in the same academic placement for at least one year prior to data collection.

Protection of Human Subjects

This research was reviewed by the Human Subjects Committee of the University of Arizona. To assure human subjects protection, all identifying information about participants was encoded. A description of the research was provided to each of the subjects' parents, describing the purpose of the study and assurance of confidentiality (see Appendix C). Withdrawal from the study was permitted at any time upon request of the parent(s) or child.

The Setting

The setting for this study was a junior high school in urban Arizona. Permission to conduct research at this site was first approved by the school district's Director of Research and Evaluation. The school and the teachers involved also consented to the proposed research before the project began. Parental and student permission forms were completed, signed and returned to the school prior to any data collection.

Assessments

Teacher Survey

The Teacher Survey included questions about descriptive and demographic information for each child, as well as the teachers' opinions on each child's social interactions and academic performance. For example, teachers were asked, "In your opinion, is this student considered popular by hearing peers?" Teachers were also asked to evaluate a student's grades and

effort on a four-point scale: excellent, good, fair, or poor (see Appendix G).

Demographic variables included in this survey were: aided/unaided pure tone average, sex, age, functional hearing status, parent's hearing status, and mode of communication.

Vineland Adaptive Behavior Scale - Classroom Edition

The Vineland Adaptive Behavior Scale, Classroom Edition is a revision by Sparrow, Balla and Cicchetti (1985) of the Vineland Social Maturity Scale developed by Edgar Doll in 1935. This measure was developed to assess personal and social adequacy of individuals from birth to adulthood. "The scales are applicable to handicapped and nonhandicapped individuals...the revised Vineland does not require the direct administration of tasks to an individual, but instead requires a respondent who is familiar with the individual's behavior" (Harrison, 1985, p. 1). The two domains of the Vineland used in this study were: Communication and Socialization. The Communication Domain of the Vineland is composed of three subdomains: a) receptive, b) expressive, and c) written. The Socialization Domain also consists of three subdomains: a) interpersonal relationships, b) play and leisure, and c) coping skills (Harrison, 1985). The alpha coefficients reported by Harrison (1985) for the Communication Domain ranged from .88 to .95 across the nine age groups with a median of .93. The socialization alpha coefficients ranged from .91 to .96 with the median being .94. Three other measures of reliability were reported in

the manual: split-half, test-retest, and inter-rater reliability. Split-half reliability coefficients were as follows: Communication Domain, .73 to .93; Socialization Domain, .78 to .94. Test-retest reliability (2 to 4 week retest interval) ranged from .80 to .93. Interrater reliability coefficients ranged from .62 to .75.

(Harrison, 1985).

Piers-Harris Children's Self-Concept Scale - Adapted

The Piers-Harris Children's Self-Concept Scale, developed by Ellen V. Piers and Dale B. Harris (Piers, 1984), is a brief, self-report measure designed to aid in the assessment of self-concept in children and adolescents. "Self-concept, as assessed by this instrument, is defined as a relatively stable set of self-attitudes reflecting both a description and an evaluation of one's own behavior and attributes" (Piers, 1984, p. 1). Items on the scale are scored in either a positive or negative direction to reflect this self-evaluative dimension. A high score on the scale suggests a positive self-evaluation, whereas a low score suggests a negative self-evaluation. The Piers-Harris Self-Concept Scale elicits children's conscious self-perceptions, rather than requiring researchers to make inferences about how they feel about themselves from their behaviors.

The Piers-Harris Self-Concept Scale used in this study is an adaptation by the researcher of the 40 question Short Form (A) developed by Franklin, Duley, Rousseau, and Sabers (1981) (see Appendix H). Some of the language and sentence structure were modified to be used with deaf and hard of hearing

adolescents. The researcher received assistance in this process from two professors at the University of Arizona and an administrator at the Arizona State School for the Deaf and Blind.

This scale may be administered either individually or in groups (Piers, 1984). Children are shown a number of statements that tell how some people feel about themselves, and are asked to indicate whether each statement applies to them using "yes" or "no" responses.

Peer Rating Scale - Adapted

McConnell and Odom (1986) indicated that the "...advantage of using a peer rating scale is that every child in the class is rated, as contrasted with the peer nomination scale in which only a few children are chosen" (p. 235). Because ratings are obtained for a number of subjects, a change of one or two choices across time will not greatly affect the reliability of the total rating scores (Asher, Singleton, Tinsley, & Hymel, 1979). Thompson and Powell (1951) administered peer ratings and nominations to school-aged children across three time-periods (i.e., on consecutive days, a week later, and five weeks later). The rating-scale scores were more stable than nominations, resulting in coefficients greater than .90 in all but one case. Sainato, Zigmond and Strain (1983) found with the Peer Acceptance Scale, used with mentally retarded, learning disabled, and nonhandicapped children, test-retest coefficients of .75 and above.

The rating scale used in this study was an adaptation of a scale developed by Ghezzi (1991). Ghezzi asked children to rate their peers on a continuum. Ghezzi's (1991) rating scale used a 3-point code to determine how much students liked to play with and talk to each other. Ghezzi instructed students to read each classmate's name and then rate them (see Appendix I). The subjects in Ghezzi's study were younger than the subjects in the current study. The researcher in consultation with professors determined that in the current study it would be more appropriate to ask the students who they liked and who they liked to spend time with. The scale used in this study consisted of 4-points: a lot(4), a little(3), very little(2), or not at all(1).

Student Activity Questionnaire

The Student Activity Questionnaire was adapted for this study from the Social Activity Scale developed by Stinson, Whitmire-Chase and Kluwin (1990). This scale has 51 items and was developed to assess participation, relatedness and perceived social competence in hearing-impaired adolescents. The Social Activity Scale was used with students ranging in age from approximately 15-21 years old. This scale consists of four parts. Stinson, Whitmire-Chase and Kluwin asked students to read the directions to themselves as they were read aloud by the researcher, and signed by either the teacher or the interpreter. Students were also instructed to stop after they had completed each section and wait until they were instructed to continue. The first page of the

questionnaire differed slightly for hearing and hearing-impaired students (see Appendix J). In the second section students were to read each question and determine how often they do what was described, on a continuum from "Never" to "Everyday", and to then circle the most appropriate answer. The third part asked students again to read each question and decide how often they do what was stated: "None of the Time", "Some of the Time", "Most of the Time", or "Always" and to circle the answer that was most true for them. In the last section students were to read each statement and decide how often each statement was true for them and to circle that answer: "None of the Time", "Some of the Time", "Most of the Time", or "Always".

The language and format of the questionnaire used in the current study was modified for use with younger students, ranging in ages from 12-17 years old. Again, the expertise of professors at the University of Arizona and an administrator at the Arizona State School for the Deaf and Blind were enlisted in adapting the scale.

Data Collection

Data were collected during the Spring of 1992 at a junior high school in urban Arizona. Teachers were responsible for completing the Teacher Survey and the Vineland Adaptive Behavior Scale, Social and Communication Subdomains, for each child (hearing, hard of hearing, or deaf). The researcher, with the assistance of the teachers, administered the Piers-Harris Self-Concept

Scale (Adapted), Peer Rating Scale (Adapted) and the Student Activity Questionnaire (Adapted from Stinson, Whitmire-Chase, & Kluwin) during one of five classes: physical education, sewing, music, industrial/technical shop, and math. The Piers-Harris Scale was the first assessment administered to the students. The directions were read aloud and signed. Students were encouraged to ask for clarification if they did not understand what was required of them. Students were asked to read each statement and decide if it was true of them. If it was true for a student, then he/she was to circle yes. If it was not true for a student, then he/she circled no (see Appendix H). This instrument took each student approximately 10 minutes to complete. The Peer Rating Scale was then administered. Students were given the Peer Rating Scale and asked to read the directions as the teacher or interpreter signed them and the researcher read them aloud. Students were offered the opportunity to ask questions if they did not understand what was being asked of them. Students were first asked to look at side A, find their name, and to put a line through it. They were then asked to read each name on the left side of the form and decide how much time they like to spend with that student (see Appendix I). After all of the students completed side A, then the researcher asked the students to turn their form over and to again follow the instructions as she read them aloud and either the teacher or the interpreter signed them. Students followed the same procedures they did for side A, however, now they were

asked to decide how much they like each of their peers. The rating scale took approximately 15 minutes to complete.

The final measure administered to the students was the Student Activity Questionnaire. Students were instructed again to read the directions to themselves as they were read aloud and signed. There were four parts to this questionnaire. Students were instructed to stop at the end of each section and to wait until the researcher began to read aloud and the teacher or the interpreter signed the instructions for the next part. The first section differs slightly for hearing and hearing impaired students (see Appendix J). In the next two sections students were to read each statement and decide how often they do what is asked. In the last section students were to read each statement and decide how often each statement was true for them (see Appendix J). This questionnaire took approximately 25 minutes for each student to complete.

The researcher also collected a five-minute speech sample from each deaf and hard of hearing student. This was collected during a conversation the student had with the researcher. Each student's speech was then coded through the use of a method developed by Subtelny, Orlando, and Whitehead (1981) at the National Technical Institute for the Deaf. Two raters were trained in the use of this procedure and they rated each student's speech on a scale from 1 to 5, one being "completely intelligible" and five being "completely unintelligible". A mean score was computed for each student.

To determine the reliability (consistency of judgments) of this measure 15 speech pathologists, trained in identifying speech and voice characteristics of the deaf listened to and rated the training samples. One week later, they listened to the same tapes and rated them a second time. A comparison of the first and second ratings showed that intra-judge agreement was greater than 80%. Agreement was defined as the same rating or a rating within one scale value. Validity for the speech component of the package was measured by the percent of inter-judge agreement with the answer key. Both of these agreements were over 95% with little variability indicated.

Data Analysis

The variables measured in this study were: self-concept, social acceptance, and perceived social acceptance. Demographic information gathered for each child was: age, gender, hearing status, and academic performance. Information on mode of communication, speech intelligibility, aided and unaided pure tone averages, and length of time in a mainstream program were collected for hard of hearing and deaf students. The dependent variable to be measured in this study was actual academic success.

Data were analyzed in the following ways:

Research Question 1.

What is the relationship between social acceptance and self-concept? A correlation coefficient was computed to answer this question.

Research Question 2.

Was acceptance by peers different for hearing students when compared to their hard of hearing and deaf peers? A 3-way Analysis of Variance was used to answer this question.

Research Question 3.

Were the self-concepts' of hearing students different than their hard of hearing and deaf peers' self-concepts? A 2 X 2 Analysis of Variance was computed to answer this question.

Research Question 4.

Were hearing students' perceptions of their social acceptance different from their hard of hearing and deaf peers' perceptions of their social acceptance? A 2 X 2 Analysis of Variance was computed to answer this question.

Research Question 5.

What was the best predictor for social acceptance? Multiple regression analyses were used to answer this question.

Research Question 6.

What variable or combination of variables contributed the most to the prediction of the dependent measure: academic success? Multiple regression analyses were used to answer this question.

Summary

The researcher described the characteristics of the sample and the setting. The assessment tools used in this study were introduced and adaptations to three of the measures were described. The procedures used for collecting data were reported and the data analyses conducted for each research question were presented.

CHAPTER FOUR

RESULTS OF DATA ANALYSIS

Introductory Statement

This chapter includes the results of the study. The chapter begins with a report of the demographic data collected from the teachers for each subject. The results of the relationship between social acceptance and self-concept follows. The next section addresses whether or not the relationship between social acceptance and self-concept was different for hearing subjects when compared to their deaf and hard of hearing peers. The following discussion compares the self-ratings of hearing subjects with their deaf and hard of hearing peers' self-ratings of perceived social acceptance. The final discussion explores what independent or demographic variable or combination of variables contributed most to the prediction of academic success.

Description of the Subjects

A total of 35 subjects participated in the study. Twenty-five of the students had normal hearing, five students were identified as hard of hearing with unaided pure tone averages between 32dB and 63dB, and five students were identified as deaf with unaided pure tone averages between 82dB and

110dB. The age of hearing students ranged from 13 years old to 16 years old, with the mean age being 14 years and 2 months. The age of hard of hearing students ranged from 13 years old to 17 years old, with the mean age being 15 years and 4 months. Ages for students identified as deaf, ranged from 14 years old to 16 years old, with the mean age being 14 years and 8 months. Seventeen of the hearing students were female (68%) and eight were male (32%). Three of the hard of hearing students were female (60%) and two were male (40%). Four of the students identified as deaf were female (80%) and one was male (20%) (see Table 1).

All of the students who were identified as hard of hearing primarily used oral communication at school. Students identified as deaf utilized various methods to communicate: three students used oral communication, one student used manual communication, and one student used both oral and manual communication. All of the hard of hearing and deaf students had been in a mainstream program for at least six years. The students identified as either hard of hearing or deaf had been with the same hard of hearing and deaf peers at school for at least four years.

A final comparison of demographic data collected were grade point averages which were compared with teachers' opinions of students' academic performance. That is, teachers were asked to rate each students grades as:

Table 1
Demographic Data on Sample (N = 35)
Age by Gender by Hearing Status

Age	Hearing						Hard of Hearing						Deaf						Total	
	Male		Female		Total		Male		Female		Total		Male		Female		Total			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
13	2	33	4	67	6	24	0	--	1	100	1	20	0	--	0	--	0	--	7	20
14	4	40	6	60	10	40	0	--	0	--	0	--	1	50	1	50	2	40	12	34
15	2	29	5	71	7	28	1	100	0	--	1	20	0	--	2	100	2	40	10	29
16	0	--	2	100	2	8	1	50	1	50	2	40	0	--	1	100	1	20	5	14
17	0	--	0	--	0	--	0	--	1	100	1	20	0	--	0	--	0	--	1	3
TOTAL	8	32.0	17	68.0	25	71.4	2	40.0	3	60.0	5	14.3	1	20.0	4	80.0	5	14.3	35	100

excellent, good, fair or poor. Mainstream teachers rated hearing students based on their experience with each student in their classrooms. Forty percent of hearing students received excellent ratings, 36% received good ratings, 12% received fair ratings and 12% received poor ratings. Hearing students' grade point averages ranged from 1.70 to 4.00 (on a 4-point scale) with the mean being 3.08 (see Figure 1). Hard of hearing and deaf students were rated by their special education teachers (teachers of hearing impaired students). Twenty percent of hard of hearing students received excellent ratings, 60% received good ratings and 20% received poor ratings. Hard of hearing students' grade point averages ranged from 2.61 to 3.70 with the mean being 3.26 (see Figure 2). Forty percent of deaf students received excellent ratings and 60% received good ratings. Deaf students' grade point averages ranged from 3.20 to 3.90 with the mean being 3.26 (see Figure 3). A Spearman's Rho was computed for teachers' ratings and students' grade point averages. The correlation coefficient for all students (hearing, hard of hearing and deaf) was .77, for hearing students the correlation was .77, for hard of hearing and deaf students the correlation was .75.

Reliability Analysis

Prior to analyzing the data to address the research questions, a reliability analysis was conducted for the Piers-Harris Self-Concept Scale, Form A (Adapted) and the Student Activity Questionnaire. An alpha coefficient of .71

Figure 2. Correlation of teachers' subjective ratings of student performance and hard of hearing students' grade point averages

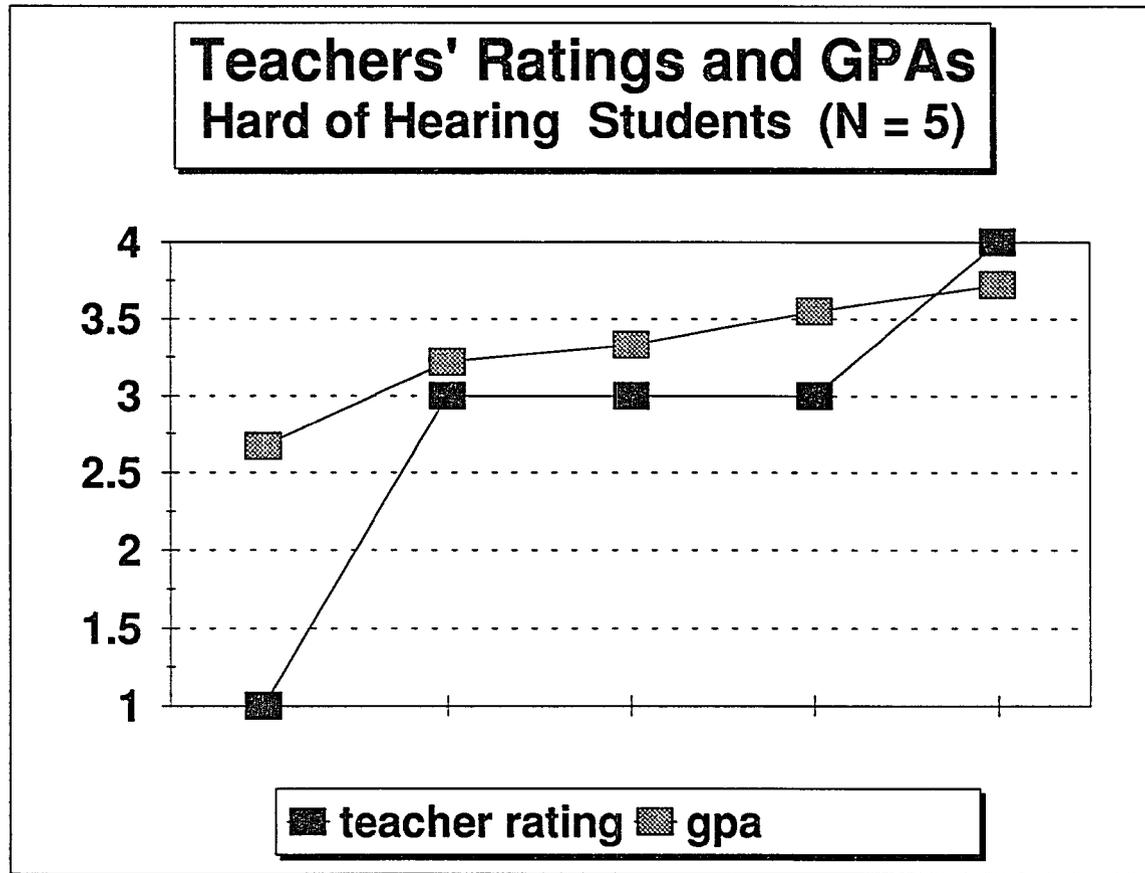
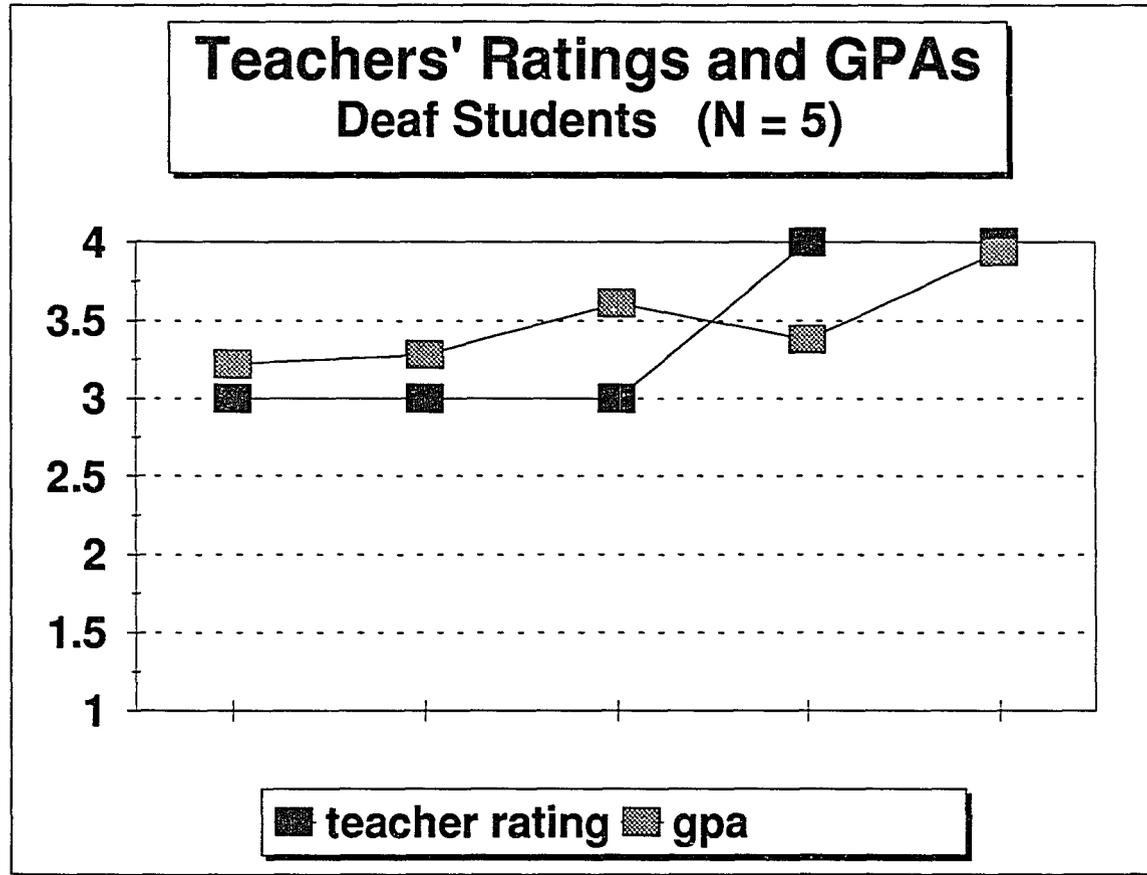


Figure 3.
averages

Correlation of teachers' subjective ratings of student performance and deaf students' grade point



was derived for the Piers-Harris Self-Concept Scale, Form A (Adapted). An alpha coefficient of .72 was computed for the Student Activity Questionnaire. Subscale alpha coefficients were also computed for the Student Activity Questionnaire. The first subscale, Participation, yielded an alpha coefficient of .73. The next subscale, Relatedness, generated an alpha coefficient of .78. The alpha coefficient for the third subscale, Perceived Social Competence, was .79. The alpha coefficients for both the Piers-Harris Self-Concept Scale, Form A (Adapted) and the Student Activity Questionnaire were .71 and .72, respectively. Given these alpha coefficients approximately 50% of the variance is being accounted for. That is, students' responses to these measures were probably not random.

Analyses of Research Questions

Prior to the analysis of the research questions, hard of hearing and deaf students were combined into one group. This was done because of the small sample sizes in both groups and to add power to the statistical analyses.

Research Question 1

The first research question examined the relationship between social acceptance and self-concept.

The initial step in answering this question was to derive a score for the Piers-Harris Self-Concept Scale, Form A (Adapted). In order to derive a score for the Piers-Harris, agreement in the direction of the responses had to be

obtained. That is, a negative response to some questions was an indicator of a positive self-concept, e.g., "I am dumb about most things". After agreement in the direction of the questions was obtained, each students' responses were summed to create a self-concept score. A high score on the Piers-Harris Self-Concept Scale suggested a positive self-concept. The next step was to derive average Peer Rating Scale scores for each student received from his/her hearing and hard of hearing and deaf peers. The Peer Rating Scale was comprised of two questions, I like to spend time with student's name and I like student's name (see Appendix I). Four average scores were obtained for each student:

1. Average score obtained for each student on "I like to spend time with student's name" as rated by hearing students;
2. Average score obtained for each student on "I like student's name", as rated by hearing students;
3. Average score obtained for each student on "I like to spend time with student's name" as rated by hard of hearing and deaf students;
4. Average score obtained for each student on "I like student's name", as rated by hard of hearing and deaf students.

The next step was to compute an average rating by hearing peers and an average rating by deaf and hard of hearing peers. The average received score from hearing peers was derived by collapsing scores for points one and two above. The average received score from hard of hearing and deaf students was derived by collapsing scores for points three and four above.

Pearson correlation coefficients were computed for the Piers-Harris Self-Concept Scale and the average Peer Rating Scale scores. A negative correlation, $r = -.84$, between the Piers-Harris Self-Concept Scale and an average Peer Rating Scale score was found for hard of hearing and deaf students being rated by their hard of hearing and deaf peers. This negative correlation ($r = -.84$) means that as deaf and hard of hearing students' self-concepts increased their acceptance by other students with hearing impairments decreased. The inverse may also be true, that is, as a deaf or hard of hearing student's acceptance by peers increased his/her self-concept decreased.

Research Question 2

This question investigated whether acceptance by peers was different for hearing students when compared to their hard of hearing and deaf peers.

A 3-way Analysis of Variance was conducted using students' average scores on the Peer Rating Scale. Rating group, an average rating by hearing peers and an average rating by deaf and hard of hearing peers, was the within

group measure. Gender and hearing status were the between group measures in this analysis. Gender was found to be significant, $F = 6.10$, significance level = .019. The boys' mean score for ratings by hearing peers was 1.27. The girls' mean score for ratings by hearing students was 1.81. Girls were rated significantly higher than boys (see Figure 4).

A significant interaction effect between gender and hearing status was found, $F = 5.15$, significance level = .03. Male students with normal hearing received a mean score of 1.906 from their hard of hearing and deaf peers (see Table 2). Male students with hearing impairments received a mean score of 1.583 from their hard of hearing and deaf peers (see Table 3). Female students with normal hearing received a mean score of 1.606 from their hard of hearing and deaf peers (see Table 4). Female students with hearing impairments received a mean rating of 2.864 from their hard of hearing and deaf peers (see Table 5).

Therefore, female students with hearing impairments received the highest ratings on the Peer Rating Scale from their hard of hearing and deaf peers. This may be because there were more female students with hearing impairments in this group, or it may be that in this study hard of hearing and deaf students prefer to be with female students who have hearing impairments (see Figures 5, 6, & 7).

Figure 4. Average ratings by hearing students using the Peer Rating Scale

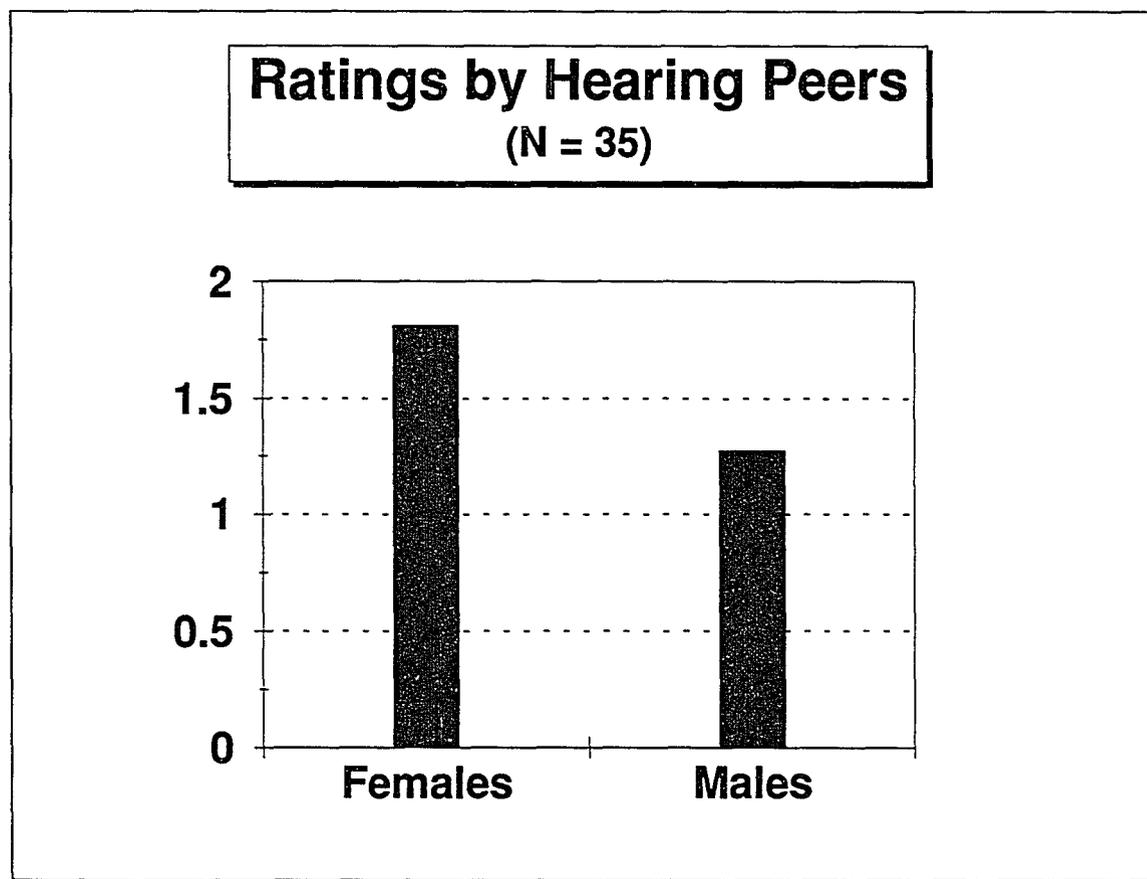


Table 2
Mean Peer Ratings for Male Hearing Students using the Peer Rating Scale
(N = 8)

Student Number	Age	Mean Score From Hard of Hearing and Deaf Students	Mean Score from Hearing Students
9	13	2.00	1.00
11	13	2.50	0.85
24	14	0.00	0.45
10	14	1.00	1.95
23	14	1.75	1.60
25	14	3.00	2.20
17	15	2.50	2.25
34	15	2.50	1.35
Group Mean Score		1.906	1.456

LEGEND
Average Peer Ratings For: "I like to spend time with..." and "I like..."
0 = not at all
1 = very little
2 = a little
3 = a lot

Table 3
Mean Peer Ratings for Male Hard of Hearing and Deaf Students using the Peer Rating Scale (N =3)

Student Number	Age	Mean Score From Hard of Hearing and Deaf Students	Mean Score from Hearing Students
6	14	0.75	0.80
28	15	1.85	0.90
15	16	2.15	0.70
Group Mean Score		1.583	0.80

LEGEND
Average Peer Ratings For: "I like to spend time with..." and "I like..."
0 = not at all
1 = very little
2 = a little
3 = a lot

Table 4
 Mean Peer Ratings for Female Hearing Students using the Peer Rating Scale
 (N = 17)

Student Number	Age	Mean Score From Hard of Hearing and Deaf Students	Mean Score from Hearing Students
8	13	1.50	1.35
12	13	2.00	1.50
16	13	1.90	1.50
22	13	2.00	2.35
4	14	1.25	2.10
18	14	1.20	1.70
26	14	1.25	0.60
33	14	1.60	1.85
19	14	1.60	2.70
31	14	2.00	0.95
29	15	0.00	1.75
3	15	0.00	1.85
20	15	0.00	2.50
27	15	2.00	1.95
2	15	3.00	2.60
30	16	3.00	2.00
14	16	3.00	2.45
Group Mean Score		1.606	1.865

LEGEND
Average Peer Ratings For: "I like to spend time with..." and "I like..."
0 = not at all
1 = very little
2 = a little
3 = a lot

Table 5
Mean Peer Ratings for Female Hard of Hearing and Deaf Students using the Peer Rating Scale (N =7)

Student Number	Age	Mean Score From Hard of Hearing and Deaf Students	Mean Score from Hearing Students
32	13	2.90	1.70
1	14	2.75	2.00
21	15	2.90	0.60
7	15	3.00	1.60
35	16	3.00	1.80
13	16	2.90	2.40
5	17	2.60	1.90
Group Mean Score		2.864	1.714

LEGEND
Average Peer Ratings For: "I like to spend time with..." and "I like..."
0 = not at all
1 = very little
2 = a little
3 = a lot

Figure 5. Mean peer rating scores for male students using the Peer Rating Scale

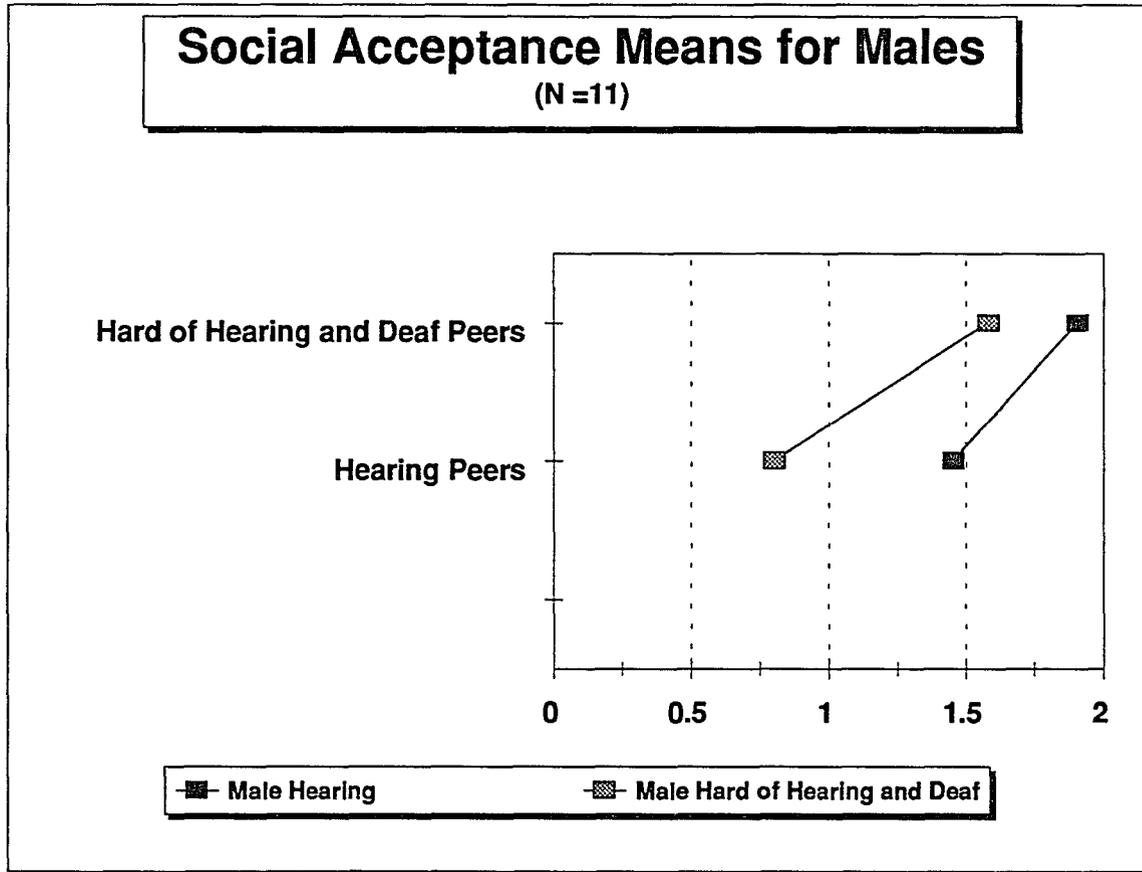


Figure 6. Mean peer rating scores for female students using the Peer Rating Scale

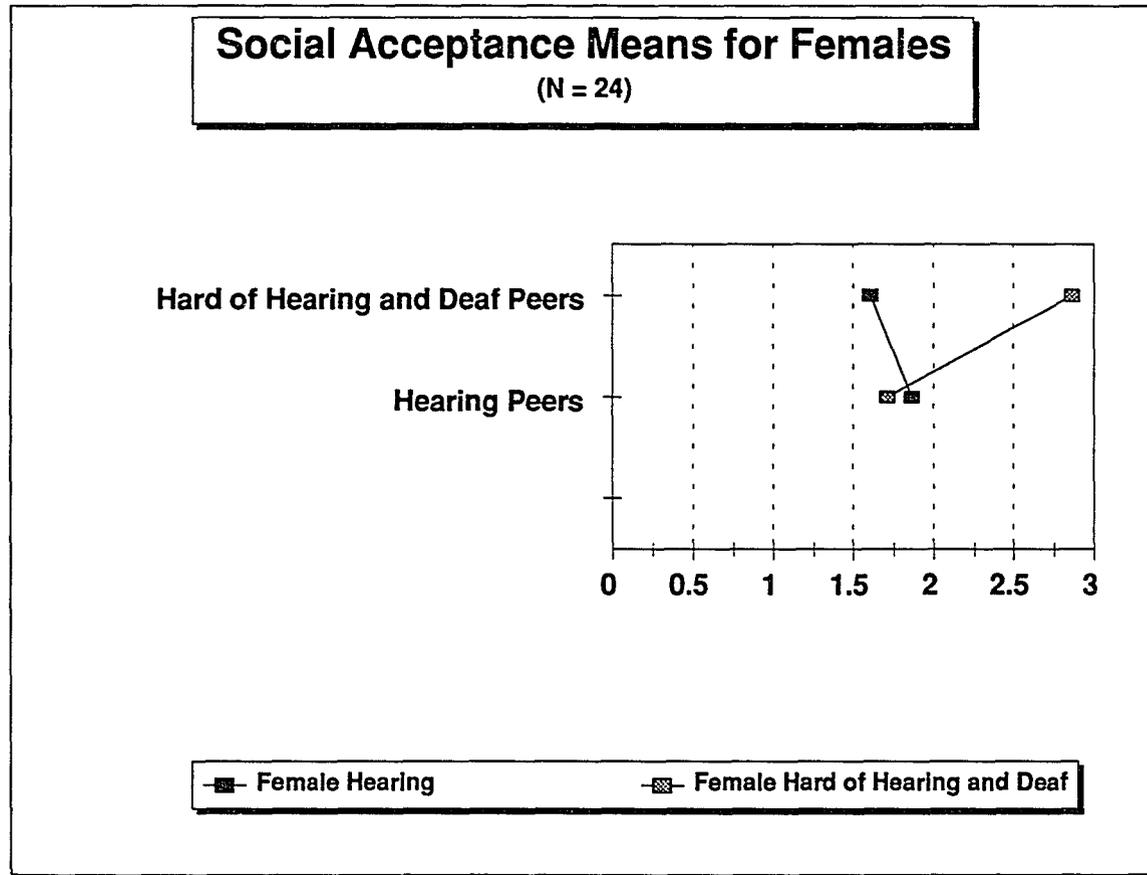
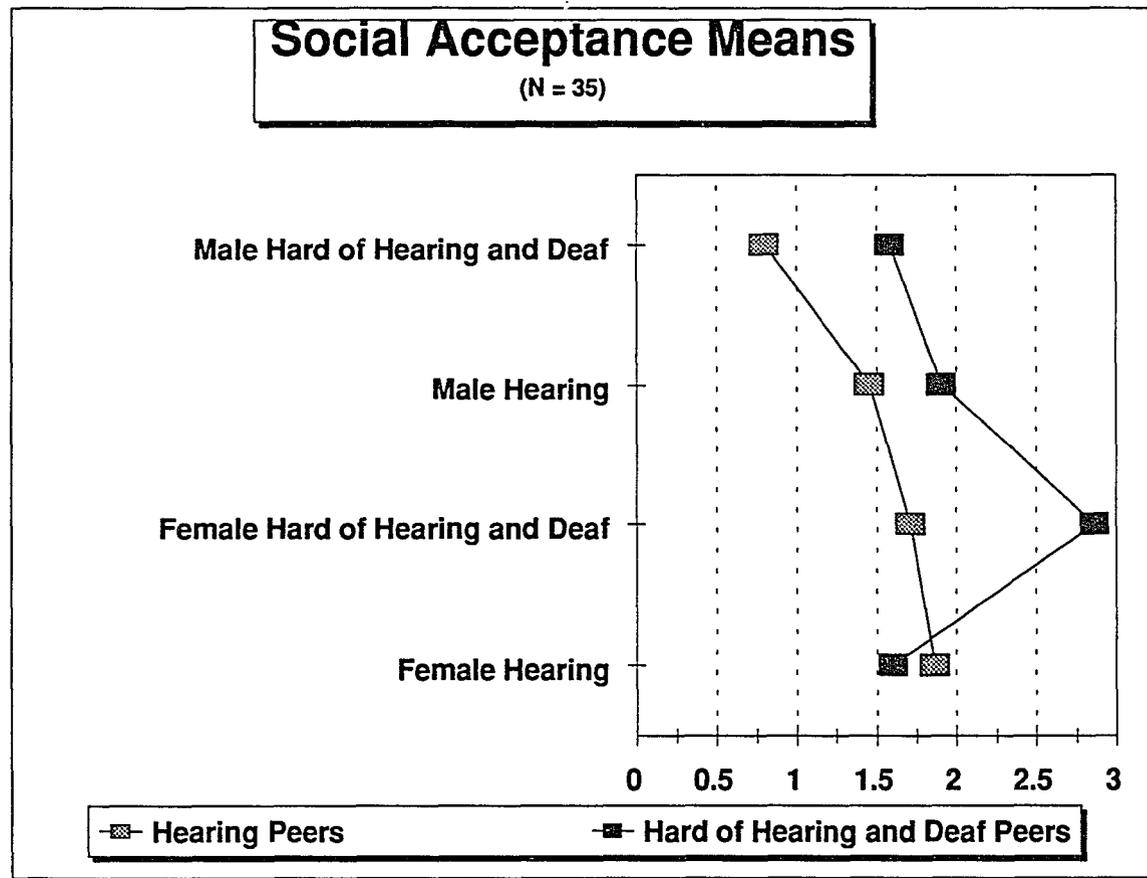


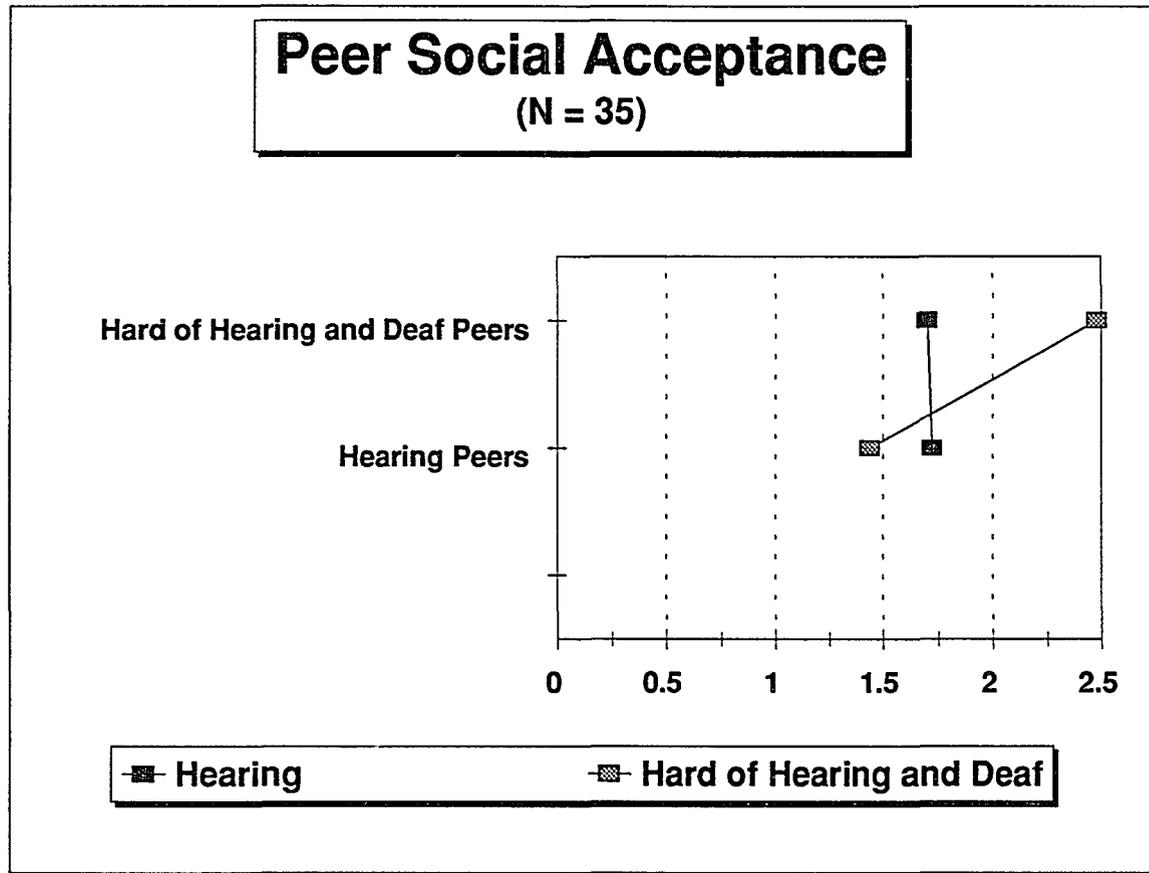
Figure 7. Mean peer rating scores for all students using the Peer Rating Scale



A Post Hoc Contrast was conducted for the gender by hearing status interaction. The first contrast compared male students with hearing impairments to male students with normal hearing. This contrast was found to be not significant ($T = -1.267$; T Probability = .215). The second contrast compared female students with hearing impairments to female students with normal hearing. With a Bonfaroni Adjustment to the alpha level, this contrast was also found to be not significant ($T = 2.191$; T Probability = .036). However, because of the sample size and the Bonfaroni adjustment, this post hoc test may have been too conservative. Although this finding is not statistically significant, it may be practically significant. Female students of this age with hearing impairments may actually prefer to develop friendships with students of their same sex and hearing status rather than trying to bridge the gap with female hearing students. Therefore, gender and hearing status should not be ruled out as significant considerations in developing friendships.

A significant within subjects interaction effect between hearing status and rating group was found, $F = 5.62$, significance level = .024. Hearing students rated by their hearing peers received a mean score of 1.724. Hearing students rated by their hard of hearing and deaf peers received a mean rating of 1.702. Hard of hearing and deaf students rated by their hearing peers received a mean rating of 1.440. Hard of hearing and deaf students rated by their hard of hearing and deaf peers received a mean rating of 2.480 (see Figure 8).

Figure 8. Description of the social acceptance ratings for same and different hearing status peers using the Peer Rating Scale



A Post Hoc Contrast was conducted for the rating group by hearing status interaction. The first contrast compared ratings by hearing students given to hard of hearing and deaf students to ratings by hearing students given to hearing students. This contrast was found to be not significant ($T = -.941$; T Probability = .354). The second contrast compared ratings by hard of hearing and deaf students given to hard of hearing and deaf students to ratings by hard of hearing and deaf students given to hearing students. This contrast was found to be significant even with a Bonfaroni Adjustment to the alpha level ($T = 2.579$; T Probability = .015). Hard of hearing and deaf students rated their hard of hearing and deaf peers higher than they rated their hearing peers. This finding suggests that hard of hearing and deaf students of this age would prefer to develop friendships with students who also had hearing impairments.

Research Question 3

The third research question investigated whether self-concept differed for hearing students when compared to their hard of hearing and deaf peers.

A 2 X 2 Analysis of Variance was conducted to determine if there was a difference between the self-evaluations of students with hearing impairments and their normally hearing peers. Gender and hearing status were the independent variables. No significant interaction or main effects were found.

Research Question 4

The fourth research question explored whether hearing students' perceptions of their social acceptance was different from their hard of hearing and deaf peers' perceptions of their social acceptance.

A 2 X 2 Analysis of Variance was conducted to determine if there was a significant difference between these groups and their perceptions. Gender and hearing status were the independent variables. No significant interaction or main effects were found.

Research Question 5

The fifth research question explored what variable was the best predictor for social acceptance.

This question was analyzed in four parts:

1. What was the best predictor of social acceptance for hearing students being rated by their hearing peers?
2. What was the best predictor of social acceptance for hearing students being rated by their deaf and hard of hearing peers?
3. What was the best predictor of social acceptance for hard of hearing and deaf students being rated by their hard of hearing and deaf peers?

4. What was the best predictor of social acceptance for hard of hearing and deaf students being rated by their hearing peers?

These questions were addressed by conducting step-wise multiple regression analyses. In each equation the dependent measure was the received scores from the Peer Rating Scale, and the independent measures were: gender; chronological age; grade point average; aided pure tone average; speech intelligibility; Vineland Adaptive Behavior Scale, Social Domain; Vineland Adaptive Behavior Scale, Communication Domain.

The results of the multiple regression indicated that the best predictor of social acceptance for hearing students being rated by their hearing peers was their score on the Vineland Adaptive Behavior Scale, Social Domain, Multiple $R=.48$; $RSquare=.23$; $Beta=.48$. This suggests that hearing students who received high scores for socialization by their teachers were also accepted by their hearing peers.

The best predictor of social acceptance for hearing peers being rated by their deaf and hard of hearing was grade point average, Multiple $R=.46$; $RSquare=.21$; $Beta=.44$. This may indicate that hard of hearing and deaf students were more attracted to hearing students they believed to be "smart".

The best predictor of social acceptance for hard of hearing and deaf students being rated by their hard of hearing and deaf peers was gender, Multiple

$R=.87$; $RSquare=.76$; $Beta=.87$. This may be because there were more females in this subgroup and they have an established group of friends within the group.

The final question asked what was the best predictor of social acceptance for hard of hearing and deaf students being rated by their hearing peers? Gender was again found to be the best predictor with a Multiple R of $.79$; $RSquare=.62$; $Beta=.79$. Again, there are more females in the study and they may have tended to rate other females more favorably than the hard of hearing and deaf males. Also, using the step-wise technique with many variables and a small sample size may capitalize on chance, i.e., these findings may not be found using the same predictors with a larger population.

Research Question 6

The final research question explored what variable or combination of variables was the best predictor of academic success.

This question was analyzed in three parts:

1. What was the best predictor of academic success for hard of hearing and deaf students?
2. What was the best predictor of academic success for hearing students?
3. What was the best predictor of academic success for all students?

Step-wise multiple regression analyses were conducted to answer these questions. The dependent measure in these analyses was grade point average. The variables included in these regressions as predictors were gender; chronological age; aided pure tone average; speech intelligibility; Vineland Adaptive Behavior Scale, Social Domain; Vineland Adaptive Behavior Scale, Communication Domain; Piers-Harris Self-Concept Scale, Form A (Adapted); Student Activity Questionnaire, Perceived Social Competence Subdomain; and received scores on the Peer Rating Scale.

The best predictor of academic success for hard of hearing and deaf students was the average score they received from their hearing peers on the Peer Rating Scale, Multiple $R=.67$; $RSquare=.45$; $Beta=.67$.

The best predictor of academic success for hearing students was the mean score they received from their hard of hearing and deaf peers on the Peer Rating Scale, Multiple $R=.46$; $RSquare=.21$; $Beta=.46$.

Finally, the best predictor of academic success for all students was the average peer rating score they received from their hard of hearing and deaf peers, Multiple $R=.47$, $RSquare=.22$; $Beta=.47$.

Summary

This chapter included a report of the demographic data collected from teachers for each subject. Teachers' subjective ratings of academic success were correlated with students' actual grade point averages. Reliability analyses were

computed for each of the assessments used in this study. Finally, the results of the research study were presented.

The primary finding of the data analyses indicated a negative correlation between self-concept and social acceptance using the Piers-Harris Self-Concept Scale and the Peer Rating Scale for hard of hearing and deaf students being rated by their same hearing status peers.

The second result was a significant interaction effect between gender and hearing status when comparing acceptance ratings for hard of hearing and deaf students and their normally hearing peers. Female students with hearing impairments received the highest ratings from their hard of hearing and deaf peers. A significant within subjects interaction effect between hearing status and rating group was also found. Hard of hearing and deaf students rated by their same hearing status peers received the highest ratings.

Another significant finding was that the best predictor of social acceptance for hearing students being rated by their hearing peers was the Vineland Adaptive Behavior Scale, Social Domain. The best predictor of social acceptance for hearing peers being rated by their deaf and hard of hearing peers was grade point average. For hard of hearing and deaf students being rated by both their hearing peers and their hard of hearing and deaf peers the best predictor of social acceptance was gender.

The best predictor of academic success for hard of hearing and deaf students was found to be the scores they received from their hearing peers on the Peer Rating Scale, the best predictor for hearing students were the scores they received from their hard of hearing and deaf peers on the Peer Rating Scale. Finally, the best predictor of academic success for all students were the scores they received from their hard of hearing and deaf peers.

No significant differences were found between hearing students and their hard of hearing and deaf peers' self-ratings on the self-concept and perceived social acceptance measures.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Introductory Statement

In this chapter a review of the purpose, process and conclusions of this study will be presented. Implications for teachers, students, and administrators will be addressed. The limitations of this study will be discussed. Recommendations for future research will be explored.

Discussion

Research Question 1

One of the most remarkable results found was an inverse relationship between hard of hearing and deaf students' self-concepts and their acceptance by their hard of hearing and deaf peers. The results of this research indicated that hard of hearing and deaf students overall received high social acceptance ratings from their same hearing status peers. This finding contradicts what was found by Sheare (1976) who found a positive correlation between peer acceptance and self-concept. However, his study was conducted with younger students, whereas, the students in this study were adolescents. Although these students received relatively high acceptance ratings from their peers they, as Meadow (1980)

posited, may be more regularly confronted with their minority status and this may in turn have a negative effect on their self-concept. Holland and Andre (1987) have recommended that one way to elevate one's self-concept might be to increase participation in school activities.

Research Question 2

According to the data analysis, acceptance by hearing peers seemed to be influenced by one's gender. For example, hearing students rated girls significantly higher than they rated boys. Lederberg, Chapin, Rosenblatt, and Vandell (1986) found similar results with deaf and hearing preschool children. They found that preschoolers preferred to play with children of their same ethnicity, gender, and age. Although the current study was conducted with adolescents, the results are consistent with the findings of Lederberg, Chapin, Rosenblatt, and Vandell. There were more female students in this sample and they were more likely to choose to spend time with other girls. Also, as a group the male students received lower scores than female students on the Social Domain of the Vineland Adaptive Behavior Scale. Hearing students in general, and female hearing students in particular, may have perceived the male students as immature and, therefore, as a group did not give them high ratings.

Acceptance by hard of hearing and deaf peers seems to be affected by the interaction between gender and hearing status. Hard of hearing and deaf males received the lowest mean rating from their hard of hearing and deaf peers. This

may be because there were twice as many hard of hearing and deaf female students as male students. These students were in junior high school and one hypothesis might be that the girls belonged to a clique and they did not include boys with hearing impairments. As a group, hard of hearing and deaf students rated the male hearing students higher than they rated hard of hearing and deaf male students. Hard of hearing and deaf males might have rated hearing males higher because they wanted to belong to their group. The hard of hearing and deaf female students might have rated the male hearing students higher because they perceived them as being more mature. The hard of hearing and deaf male students, as a group, received the lowest ratings on the Social Domain of the Vineland Adaptive Behavior Scale which would be consistent with the inference that the hard of hearing and deaf female students saw them as immature. This finding may corroborate what Farrugia and Austin (1980) found, which was that deaf students in mainstream settings were less mature than their deaf peers in residential settings.

Another significant interaction related to acceptance of peers was between hearing status and rating group. That is, hearing students received similar mean acceptance scores from hearing, hard of hearing and deaf peers. Hard of hearing students received significantly lower mean scores from their hearing peers. This result suggests that hard of hearing and deaf students as a group may not be included in hearing students' social groups. Hard of hearing and deaf students

received significantly higher mean acceptance scores from their same hearing status peers. This result may mean that hard of hearing and deaf students look to peers of the same hearing status for communication, association, and belonging. These findings are similar to those found by Foster (1989) and Stinson, Kluwin and Whitmire-Chase (1990) who suggested that acceptance by hearing impaired peers in a mainstream setting may be as important as, if not more important than, acceptance by hearing peers in the socialization process.

Research Question 3

No significant differences were found in the relationship between self-concept and social acceptance for students with normal hearing and students with hearing impairments. This result indicates that in the present study hearing, hard of hearing and deaf students' self-evaluations were similar, neither extremely positive nor excessively negative. This finding contradicts the results found by Brunshwig (1936), Titus (1956) and Gillies (1968) who all found deaf and hard of hearing students' self-concept ratings to be significantly higher than their hearing peers' self-concept ratings.

Research Question 4

No significant differences were found between hearing and hard of hearing and deaf students' perceptions of their social acceptance. The lack of a significant difference between these groups may indicate that, regardless of hearing status, students were aware of their social position in school. That is, students with

hearing impairments know who the popular students are and they also know if they fall into that group. In the current study, hard of hearing and deaf students had a well established support group with their deaf and hard of hearing peers; however, they did not enjoy the same kind of relationship with their hearing peers. In contrast, Ladd, Munson and Miller (1984) found that deaf students developed "integrated friendships" with hearing peers, although they found that these relationships did not continue outside of school. However, the results from this study indicated that "integrated friendships" among students had not developed. A suggestion offered by Saur, Lane, Hurley and Opton (1986) to increase acceptance of hard of hearing and deaf students by their hearing peers was to decrease communication barriers, and at the same time increase deaf and hard of hearing students' involvement in extracurricular activities.

Research Question 5

This question was divided into four parts. The first part investigated what variable was the best predictor of social acceptance for hearing students being rated by their hearing peers. The best predictor for hearing students being rated by their same hearing status peers was the Vineland Adaptive Behavior Scale, Social Domain. This result suggests that hearing students prefer to develop friendships with other hearing students they see as being mature and socially competent. Hymel (1986) posited that social acceptance/rejection may rely on peer perceptions and interpretations of behavior as well as the actual behavior.

The second part addressed what variable was the best predictor of social acceptance for hearing students being rated by their hard of hearing and deaf peers. The variable that had the greatest relationship to acceptance by hard of hearing and deaf peers was the hearing students' grade point averages. This result might imply that hard of hearing and deaf peers were more attracted to hearing students they perceived as "smart".

The third part of this question explored what variable was the best predictor of social acceptance for hard of hearing and deaf students being rated by their hard of hearing and deaf peers. Gender was found to be the best predictor and there was a strong relationship between gender and acceptance by hard of hearing and deaf peers. The hard of hearing and deaf student population in this study was predominantly female, and from a subjective observation these students had a well-developed support network.

The final part of this question addressed what variable was the best predictor of social acceptance for hard of hearing and deaf students being rated by their hearing peers. A moderately strong positive relationship was found between gender and acceptance ratings by hearing peers.

Research Question 6

The final research question addressed in this study concerned the identification of the variable(s) that contributed the most to the prediction of academic success. The variable with the strongest relationship to academic

success for hard of hearing and deaf students was the mean acceptance rating they received from their hearing peers. This finding seems to indicate that hard of hearing and deaf students' academic success may be related to the social acceptance ratings they received from hearing peers. Another possible explanation is that hearing students are more likely to seek out friendships with hard of hearing and deaf students they believe are good students.

For hearing students and for the sample as a whole, the best predictor of academic success was the peer acceptance ratings they received from their hard of hearing and deaf peers. This finding supports the premise that hard of hearing and deaf students appeared to select "bright" hearing peers as friends.

Conclusions

The findings in this study indicate that for hard of hearing and deaf students there is a strong negative relationship between self-concept and acceptance by their same hearing status peers. As a group, hard of hearing and deaf students seem to have a strong network of support. Gender also appeared to play a large role in peer ratings. Hearing students' and their hard of hearing and deaf peers' self-concept ratings and their perceived social acceptance ratings were not significantly different. Finally, the best predictor of academic success for hard of hearing and deaf students was the acceptance ratings they received from their hearing peers.

Implications

The results of this study suggest that gender and hearing status may influence social interactions. The nature of the relationship of these variables (hearing status, gender and social acceptance) should be further explored. Also, if the best predictor of academic success for hard of hearing and deaf students was the acceptance rating they received from hearing peers, then increasing social opportunities with hearing students may have a positive affect on hard of hearing and deaf students' academic performance.

During data collection it was observed that the hard of hearing and deaf students' homeroom was located in a portable building behind the school that housed the special education resource classrooms. The location of the building physically isolated hard of hearing and deaf students from their hearing peers, which may have perpetuated the psychological isolation. Hard of hearing and deaf students were confronted daily with the reality of the communication barriers they must overcome to develop friendships with hearing students. However, adding structural and possibly psychological barriers may make the development of friendships with hearing students nearly impossible. Although students in general, and hearing students in particular, may be taught that they should not discriminate because someone is different, the reality is that during adolescence being different is generally not valued. Erikson (1968) wrote that identity versus role confusion happens during adolescence. He stated that during this stage adolescents may

feel isolated, anxious, indecisive and are apt to look to peers for what is "normal". For many adolescents conforming and joining is how they survive this period. If, as was found in this study, the best predictor of academic success in a mainstream program for hard of hearing and deaf students is their acceptance by hearing peers, then following Saur, Lane, Hurley and Opton's (1986) suggestion might be beneficial. They recommended that by decreasing communication barriers and by increasing participation in extracurricular activities, deaf and hard of hearing students may find that they feel more confident and are more accepted by their hearing peers.

Another observation was that the special education teachers for the hard of hearing and deaf students often interceded when conflicts arose between their students and hearing students. Although the teachers were trying to be helpful, they may have inadvertently set up another barrier between students with hearing impairments and their normally hearing peers. Adler (1956) stressed the importance of allowing individuals an opportunity to turn organ inferiorities into strengths. Transformation of these inferiorities into strengths depends a great deal on whether someone receives acceptance, support, and encouragement from significant people in their lives. When students with hearing impairments encounter conflicts with their normally hearing peers, the teachers' role should be to offer support, not to intervene. Allowing students to fight their own battles will in effect

teach them that they are capable of taking care of themselves, and hopefully lead to a more positive self-concept.

Limitations

This study was conducted in one junior high school in the southwestern United States. The generalizability of the results is questionable given the sample size and the composition of the groups. Twice as many female students as male students participated in this study. The group of students with hearing impairments was small and was collapsed into one group rather than analyzing two very small groups.

Recommendations for Future Research

Future research should be conducted with a larger demographic base in more than one school with greater numbers of deaf and hard of hearing students. The sample should more accurately represent the larger population of students with respect to gender and hearing status. The relationship between social acceptance and self-concept for hard of hearing and deaf students should be replicated to either confirm or refute this finding. Overall, hard of hearing and deaf students in this study were accepted by their hard of hearing and deaf peers and their self-concepts were low. Further research is needed to investigate whether or not this pattern can be replicated with other samples. Another interesting finding to investigate would be the relationship between academic success and acceptance by hearing peers for hard of hearing and deaf students. If this finding

is substantiated in future research, then educators and parents may want to encourage hard of hearing and deaf students to increase their participation in curricular and extracurricular activities with hearing students. The motivation should be to decrease communication barriers, dispel misconceptions, and to develop "integrated friendships" which would enrich the students' mainstream experience.

Summary

This study was an initial attempt to look at factors which might affect hard of hearing and deaf students' success in mainstream settings. Future research needs to be conducted on the impact gender and hearing status may have on social relationships. Also, the relationship between social acceptance ratings from hearing students and academic performance by hard of hearing and deaf students needs to be addressed.

APPENDIX A
HUMAN SUBJECTS COMMITTEE APPROVAL

Human Subject Committee

April 24, 1992

THE UNIVERSITY OF
ARIZONA
 HEALTH SCIENCES CENTER

1690 N. Warren (Bldg. 526D)
 Tucson, Arizona 85724
 (602) 626-6721 or 626-7575

Lisa S. Coyner, M.S.
 c/o N. Eldredge, Ph.D., Adviser
 Special Education & Rehabilitation (Education 412)
 Main Campus

RE: HSC A92.55 FACTORS WHICH CONTRIBUTE TO ACADEMIC SUCCESS IN A
 MAINSTREAM SETTING: A COMPARISON OF SELF-CONCEPT AND SOCIAL
 ACCEPTANCE FOR HEARING, HARD OF HEARING AND DEAF ADOLESCENTS

Dear Ms. Coyner:

We received your above cited research proposal. The procedures to be followed in this study pose no more than minimal risk to participating subjects. Regulations issued by the U.S. Department of Health and Human Services [45 CFR Part 46.110(b)] authorize approval of this type project through the expedited review procedures, with the condition(s) that subjects' anonymity be maintained. Although full Committee review is not required, a brief summary of the project procedures is submitted to the Committee for their endorsement and/or comment, if any, after administrative approval is granted. This project is approved effective 24 April 1992 for a period of one year.

The Human Subjects Committee (Institutional Review Board) of the University of Arizona has a current assurance of compliance, number M-1233, which is on file with the Department of Health and Human Services and covers this activity.

Approval is granted with the understanding that no further changes or additions will be made either to the procedures followed or to the consent form(s) used (copies of which we have on file) without the knowledge and approval of the Human Subjects Committee and your College or Departmental Review Committee. Any research related physical or psychological harm to any subject must also be reported to each committee.

A university policy requires that all signed subject consent forms be kept in a permanent file in an area designated for that purpose by the Department Head or comparable authority. This will assure their accessibility in the event that university officials require the information and the principal investigator is unavailable for some reason.

Sincerely yours,

William F. Denny

William F. Denny, M.D.
 Chairman, Human Subjects Committee

WFD:rs

cc: Departmental/College Review Committee

APPENDIX B
LETTER OF PERMISSION



MESA PUBLIC SCHOOLS
Administration Center
549 North Stapley Drive
Mesa, Arizona 85203-7297

James K. Zaharis, Ed.D.
Superintendent

James S. DeGracie, Ph.D.
Research & Evaluation
Director
602/898-7771

March 9, 1992

Lisa S. Coyner
833 East Helen Street
Tucson, Arizona 85719

Dear Lisa:

The Mesa Public Schools Research Priority Board has approved your request to do research in the Mesa Public Schools. At this point you may proceed with the help of your district contact, Cissy Horne. Her phone number is 890-7083. It should again be pointed out that the approval by the Research Priority Board is only the first step in the conduct of research in the Mesa Public Schools. The principals, classroom teachers, and students still have the right to refuse to participate in any proposed research.

It cannot be emphasized enough that it is your task to contact the unit level personnel, to keep them informed, to administer all instruments, and in every way conduct your proposed research. It is not the responsibility of the staff members of the Mesa Public Schools to assist in the administration of any of the instruments that you are using in your research. If they wish to assist in any way, that is their prerogative but is certainly not to be expected. You should also take the initiative in picking up all documents and ensuring the smooth conduct of your research.

You should remember that the Mesa Schools can refuse to participate in all outside research projects. They may also terminate any research in progress. The manner in which you conduct your research will be a contributing factor in these decisions.

Thank you for your assistance in these matters.

Respectfully yours,

A handwritten signature in cursive script that reads "J. S. DeGracie".

James S. DeGracie

JSD:ar

pc: Cissy Horne

APPENDIX C
PERMISSION TO PARTICIPATE

College of Education
Department of Special Education and Rehabilitation

THE UNIVERSITY OF
ARIZONA
TUCSON ARIZONA

Tucson, Arizona 85721
(602) 621-7822
(602) 621-3214
(602) 621-3248
FAX (602) 621-3821

PERMISSION TO PARTICIPATE

Ms. Lisa Coyner of the University of Arizona requests your permission to include your child in a research project. This project is designed to identify factors that either contribute to or detract from social competence, which may in turn lead to a successful academic placement.

The purpose of this study is to determine if hearing impaired students are succeeding in a mainstream program as compared to their normally hearing peers. This study will look at three factors which have been hypothesized to affect successful placement in mainstream settings: self-concept, social acceptance, and perceived social acceptance.

Ten hearing impaired students will be selected for participation in this study. These students will have a hearing loss that could be categorized between mild (20dB) to profound (90dB+). Data will also be collected from approximately 25 normally hearing students who are in at least one class with the identified hearing impaired student(s). Each student will complete three sets of forms which will provide the researcher with data on his/her: 1. self-concept; 2. social acceptance; and 3. perceived social acceptance. Teachers will be asked to supply information on each child's: 1. hearing status; 2. primary mode of communication; 3. academic performance; 4. social interactions; 5. social development; and 6. communication development. The researcher will also collect a speech sample from each hearing impaired student. It is estimated that the assessments the students will be asked to complete will take approximately one and a half hours. This data will be collected in two sessions.

I hope to share the results of this research in professional journals and at conferences. Your child's identity, however, will remain confidential in all publications and presentations. All information collected on your child will be available to you and to the school at your request.

If you have any questions, please feel free to call me at (602) 622-8098 (mornings/evenings) or (602) 884-0476 (afternoons).

Please indicate whether you will allow your child to participate in this research by signing the attached permission form and returning it to _____ by _____.

Thank you very much for your consideration.

Sincerely,


Lisa S. Coyner, M.S.


Nancy Eldredge, Ph.D.
Advisor

APPENDIX D
PARENT PERMISSION FORMS

PERMISSION FORM FOR PARENTS

I, the parent/guardian of _____,
(Please Print)

permit him/her to participate in the research being conducted by Ms. Lisa Coyner. The general procedures of this research have been explained to me. The research is to be conducted under the direction of Ms. Lisa Coyner who is authorized to identify additional personnel to assist with the operations of data collection.

I allow Ms. Coyner, and/or individuals authorized by her, to obtain the following information from the school:

- a. background information
- b. school attendance
- c. social and communication development

I give permission for my child to complete assessments on:

- a. self-concept
- b. social acceptance
- c. perceived social acceptance

If my child is hearing impaired, I allow Ms. Coyner to gather a speech sample by taping a five minute conversation my child has with her.

I understand that Ms. Coyner will share the results of this research with the school and myself upon request, and that my child will not be identified in any publications or presentations. I understand that any inquiries I have about this research will be answered and that I may withdraw my consent and discontinue my child's participation at any time.

Signature

Date

Child's date of birth _____

Child's nickname _____
(Please Print)

APPENDIX E

PERMISSION FORM FOR STUDENTS WITH HEARING IMPAIRMENTS

PERMISSION FORM FOR STUDENTS WITH HEARING IMPAIRMENTS

I, _____, understand I will be in a research project
(Please Print Your Name)

done by Ms. Lisa Coyner, I understand what will happen in this research project. This study will find out how I feel about myself, how I feel about other students, how other students feel about me, and how I think other students feel about me.

I understand that I will fill out three forms:

- a. "The Way I Feel About Myself"
- b. Peer Rating Scale
- c. Student Activity Questionnaire

I allow Ms. Coyner to tape a five minute conversation I have with her.

I allow the following information from my school to be given to Ms. Coyner:

- a. background information
- b. school attendance
- c. social and communication development

I understand that Ms. Coyner will tell me the results of this study, if I want to know them. I understand that information about the group of students who were in this study will be shared with the school and/or in publications, but that I will not be identified personally. I understand that any questions I have about this research will be answered and that I may stop participating at any time.

Signature

Date

APPENDIX F
PERMISSION FORM FOR HEARING STUDENTS

PERMISSION FORM FOR HEARING STUDENTS

I, _____, understand I will be in a research project
(Please Print Your Name)

done by Ms. Lisa Coyner, I understand what will happen in this research project. This study will find out how I feel about myself, how I feel about other students, how other students feel about me, and how I think other students feel about me.

I understand that I will fill out three forms:

- a. "The Way I Feel About Myself"
- b. Peer Rating Scale
- c. Student Activity Questionnaire

I allow the following information from my school to be given to Ms. Coyner:

- a. background information
- b. school attendance
- c. social and communication development

I understand that Ms. Coyner will tell me the results of this study, if I want to know them. I understand that information about the group of students who were in this study will be shared with the school and/or in publications, but that I will not be identified personally. I understand that any questions I have about this research will be answered and that I may stop participating at any time.

Signature

Date

APPENDIX G
TEACHER SURVEY

TEACHER SURVEY

Please complete this survey in its entirety. If you have any questions or concerns, contact the researcher immediately.

Your Name _____ Date Completed _____

1. Student's Name _____

Last
First
2. Birthdate _____
3. If this student has an hearing impairment what is his/her
 - a. Aided PTA _____
 - b. Unaided PTA _____

For the questions that follow, circle the correct answer.

4. Student's Sex:
 - a. Male
 - b. Female
5. Student's Functional Hearing Status:
 - a. Hearing
 - b. Hard of Hearing
 - c. Deaf
6. What is his/her mother's hearing status?
 - a. Hearing
 - b. Hard of Hearing
 - c. Deaf
7. What is his/her father's hearing status?
 - a. Hearing
 - b. Hard of Hearing
 - c. Deaf
8. What is the student's mode of communication at school?
 - a. Aural/Oral
 - b. Sign
 - c. Both
9. How long has this student been in a mainstream school setting?
 - a. Less than 1 year
 - b. One year
 - c. Two years
 - d. Three years
 - e. Four years
 - f. Five years
 - g. Six or more years

Teacher Survey
Page 2

In the following section please circle the answer that IN YOUR OPINION is most true for this student.

10. This student interacts with hearing peers:
Frequently Often Rarely Never
11. This student interacts with hearing impaired peers:
Frequently Often Rarely Never
12. In your opinion, is this student considered popular by hearing peers?
Yes No
13. In your opinion, is this student considered popular by hearing impaired peers?
Yes No
14. Would you consider this student's grades to be:
Excellent Good Fair Poor
15. Do you consider this student's effort to be:
Excellent Good Fair Poor
16. Additional Comments:

APPENDIX H
SELF-CONCEPT MEASURE

Form A

Your Name _____

"THE WAY I FEEL ABOUT MYSELF"

1. Here are a set of statements.
2. Some of them are true of you, so you will circle **yes**.
3. Some are not true of you, so you will circle **no**.
4. Answer **every** question even if some are hard to decide.
5. Circle **only** one response for each question.
6. Remember, circle the **yes** if the statement is generally like you, or circle **no** if the statement is generally not like you.
7. Only you can tell us how you feel about yourself, so we hope you will mark the way you really feel inside.

-
1. I do many bad things..... yes no
 2. I can be trusted..... yes no
 3. I think bad thoughts..... yes no
 4. I am smart..... yes no
 5. I am dumb about most things..... yes no
 6. I am a good reader..... yes no
 7. I am cute..... yes no
 8. I have pretty eyes..... yes no
 9. I have a nice body..... yes no
 10. I am a leader in games and sports..... yes no
 11. The teacher calls on me and I get nervous..... yes no
 12. I cry easily..... yes no
 13. I am often afraid..... yes no
 14. I am one of the last to be picked for games..... yes no
 15. It is hard for me to make friends..... yes no
 16. I have many friends..... yes no
 17. I am unhappy..... yes no
 18. I am a happy person..... yes no
 19. I can draw well..... yes no

Form A
Page 2

20. I like being the way I am..... yes no
21. My family is disappointed with me..... yes no
22. My classmates make fun of me..... yes no
23. I am popular with boys..... yes no
24. I am popular with girls..... yes no
25. I can give a good report in front of the class..... yes no
26. I am slow in finishing my school work..... yes no
27. I am clumsy..... yes no
28. I am different from other people..... yes no
29. I am picked on at home..... yes no
30. I would rather work alone than with a group..... yes no
31. I am easy to be with..... yes no
32. I fight a lot..... yes no
33. When something goes wrong most of the time it is my fault..... yes no
34. I sleep well at night..... yes no
35. I have good behavior in school..... yes no
36. I don't like my looks..... yes no
37. I am often sad..... yes no
38. I make trouble for my family..... yes no
39. In school we have tests and I become worried..... yes no
40. I am good at making things with my hands..... yes no
41. I am lucky..... yes no

APPENDIX I
PEER RATING SCALE

PEER RATING SCALE

PLEASE WAIT FOR YOUR TEACHER TO READ THESE DIRECTIONS ALOUD. PLEASE ASK YOUR TEACHER TO EXPLAIN ANY OF THE DIRECTIONS THAT YOU DO NOT UNDERSTAND.

Directions for Side **A**:

1. There are two sides to this form, **A** and **B**.
2. Make sure that side **A** is facing you, because this is the side you will complete first.
3. The first thing you need to do on side **A** is to find your name and put a line through it.
4. The second thing you need to do is to fill out side **A** of this form. To do this, read each name on the left side of the form, and then ask yourself how much time you like to spend with this student.
 - a. Do you like to spend a lot of time with this student?
If yes, put an X in the column below the face with a big smile.
 - b. Do you like to spend a little time with this student?
If yes, put an X in the column below the face with a small smile.
 - c. Do you like to spend very little time with this student?
If yes, put an X in the column below the face with a small frown.
 - d. Do you like to spend no time with this student?
If yes, put an X in the column below the face with a big frown.
5. Please fill out Side **A** as quickly as you can, and please keep your eyes on your own form.
6. When you finish, turn the form over to side **B**.
7. **DO NOT** write anything on Side **B** until your teacher asks you to.

Peer Rating Scale
Page 2

Directions for Side **B**:

1. The steps are the same for Side **B**, except now you are to decide how much you like each student.
2. Again, the first step is to find your name and cross it out.
3. The next step is to read each student's name and decide if you like him/her a lot, a little, very little, or not at all.
 - a. Do you like this student a lot?
If yes, put an X in the column under the face with a big smile.
 - b. Do you like this student a little?
If yes, put an X in the column under the face with a small smile.
 - c. Do you like this student very little?
If yes, put an X in the column under the face with a small frown.
 - d. Do you not like this student?
If yes, put an X in the column under the face with a big frown.
4. Please fill out side **B** as quickly as you can, and again, keep your eyes on your own form.
5. When you finish, please bring your paper to your teacher.

A

Your Name: _____



I like to spend time with:	a lot	a little	very little	not at all
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				

Your Name: _____

B



I like:	a lot	a little	very little	not at all
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				

APPENDIX J
STUDENT ACTIVITY QUESTIONNAIRE

STUDENT ACTIVITY QUESTIONNAIRE
(for hearing students)

1. There are four parts to this questionnaire.
 2. Stop at the end of each part.
 3. Wait for your teacher to read the directions for each part.
 4. This questionnaire is not part of your school work, and it will not be graded.
 5. We are looking for your honest answers to each question.
 6. Please read each question carefully.
 7. If you do not understand one of the questions, please ask for help.
 8. Thanks for your help in completing this questionnaire.
-

Name: _____

Grade: _____

1. How many classes did you attend with hearing impaired students in the Fall of 1991?
(Count all classes, including academic and activity classes)

 No classes 1-2 classes 3-4 classes 5-6 classes
2. How often are there students with hearing impairments in your mainstream classes?
(Circle the right answer)

 Never 1 class per year 1 class per semester 1-2 classes per day

 3-4 classes per day 5-6 classes per day
3. About how many of your friends in school have hearing impairments?

 0 1-5 6-10 11-15 16-20
4. About how many of your friends in school are hearing students?

 0 1-5 6-10 11-15 16-20

 21-25 26-30 31 or more

STUDENT ACTIVITY QUESTIONNAIRE
(for hard of hearing and deaf students)

1. There are four parts to this questionnaire.
 2. Stop at the end of each part.
 3. Wait for your teacher to read the directions for each part.
 4. This questionnaire is not part of your school work, and it will not be graded.
 5. We are looking for your honest answers to each question.
 6. Please read each question carefully.
 7. If you do not understand one of the questions, please ask for help.
 8. Thanks for your help in completing this questionnaire.
-

Name: _____

Grade: _____

1. How many classes did you attend with other hearing impaired students in the Fall of 1991? (Count all classes, including academic and activity classes)

No classes 1-2 classes 3-4 classes 5-6 classes
2. How often are there other students with hearing impairments in your mainstream classes? (Circle the right answer)

Never 1 class per year 1 class per semester 1-2 classes per day

3-4 classes per day 5-6 classes per day
3. About how many of your friends in school have hearing impairments?

0 1-5 6-10 11-15 16-20
4. About how many of your friends in school are hearing students?

0 1-5 6-10 11-15 16-20

21-25 26-30 31 or more

WAIT FOR YOUR TEACHER TO READ THESE DIRECTIONS TO YOU.

The directions for this part say:

1. Read each sentence.
2. Decide how often YOU do each of these things.
3. Circle the answer that is best for YOU.
4. Be sure and circle an answer for each sentence.

Here is an example:

How often do you make your bed?

There are five answers to choose from:

Never	Two or Three Times a Year	About Once a Month	About Once a Week	Every Day
N	TT	AM	AW	ED

1. You have to decide which point tells how often you do something.
2. Do you make your bed every day? If yes, circle **ED**.
3. Do you make your bed about once a week? If yes, circle **AW**.
4. Do you make your bed about once a month? If yes, circle **AM**.
5. Do you make your bed about two or three times a year? If yes, circle **TT**.
6. Do you never make your bed? If yes, circle **N**.

In my MAINSTREAM classes:

1. I talk to hearing students	N	TT	AM	AW	ED
2. Hearing students talk with me	N	TT	AM	AW	ED
3. Hearing students help me in class	N	TT	AM	AW	ED
4. I help hearing students in class	N	TT	AM	AW	ED
5. I join in class discussions	N	TT	AM	AW	ED
6. Hearing impaired students help me in class	N	TT	AM	AW	ED
7. I help hearing impaired students in class	N	TT	AM	AW	ED
8. I talk with hearing impaired students	N	TT	AM	AW	ED
9. Hearing impaired students talk with me	N	TT	AM	AW	ED

At SCHOOL (not in MAINSTREAM classes):

10. I have lunch with hearing friends	N	TT	AM	AW	ED
11. I have lunch with hearing impaired friends	N	TT	AM	AW	ED
12. I meet a hearing friend and say "Hi"	N	TT	AM	AW	ED
13. I meet a hearing impaired friend and say "Hi"	N	TT	AM	AW	ED
14. I talk with hearing friends	N	TT	AM	AW	ED
15. I talk with hearing impaired friends	N	TT	AM	AW	ED

STOP.

WAIT FOR YOUR TEACHER TO READ THESE DIRECTIONS TO YOU.

For the next part:

1. Decide how often YOU do each of these things.

Here is an example:

I like school.

There are four answers to choose from:

None of the Time	Some of the Time	Most of the Time	Always
NT	ST	MT	A

1. You have to decide which point tells how often you feel that way.
2. Do you always like school? If yes, circle **A**.
3. Do you like school most of the time but not always? If yes, circle **MT**.
4. Do you like school some of the time? If yes, circle **ST**.
5. Do you like school none of the time? If yes, circle **NT**.

I wish I had more friends;

1. who were hearing impaired	NT	ST	MT	A
2. who were hearing	NT	ST	MT	A

I wish I could talk about more things:

3. with hearing impaired students	NT	ST	MT	A
4. with hearing students	NT	ST	MT	A

I wish I spent more time:

5. with hearing impaired students	NT	ST	MT	A
6. with hearing students	NT	ST	MT	A

I wish I was more popular:

7. with hearing impaired students	NT	ST	MT	A
8. with hearing students	NT	ST	MT	A

When I'm with HEARING IMPAIRED students my age, I feel:

9. nervous	NT	ST	MT	A
10. lonely	NT	ST	MT	A
11. happy	NT	ST	MT	A
12. mad	NT	ST	MT	A
13. bored	NT	ST	MT	A
14. important	NT	ST	MT	A
15. unhappy	NT	ST	MT	A

When I'm with HEARING
students my age, I feel:

16. nervous	NT	ST	MT	A
17. lonely	NT	ST	MT	A
18. happy	NT	ST	MT	A
19. mad	NT	ST	MT	A
20. bored	NT	ST	MT	A
21. important	NT	ST	MT	A
22. unhappy	NT	ST	MT	A

STOP.

WAIT FOR YOUR TEACHER TO READ THESE DIRECTIONS TO YOU.

1. Read each sentence.
2. Decide how often this is true for YOU.
3. Circle the answer that is true for YOU.

Here is an example:

I finish my homework every night.

There are four answers to choose from:

None of the Time	Some of the Time	Most of the Time	Always
NT	ST	MT	A

1. Again, you have to decide which point tells how often you do this.
2. Do you always finish your homework? If yes, circle **A**.
3. Do you finish your homework most of the time? If yes, circle **MT**.
4. Do you finish your homework some of the time? If yes, circle **ST**.
5. Do you finish your homework none of the time? If yes, circle **NT**.

1. I fell nervous in groups of people	NT	ST	MT	A
2. I have friends who I can tell anything to	NT	ST	MT	A
3. When I am with a group of students I am the first one to talk	NT	ST	MT	A
4. When I am talking in a group of students I have a lot to say	NT	ST	MT	A
5. I can talk about many different things	NT	ST	MT	A
6. I have a lot of friends in this school	NT	ST	MT	A
7. Most of the students in this school like me	NT	ST	MT	A
8. I am always doing things with other students in this school	NT	ST	MT	A
9. I wish more students here liked me	NT	ST	MT	A
10. It is hard to make friends in this school	NT	ST	MT	A

STOP.

REFERENCES

- Adler, A. (1956). In Ansbacher, H. & Rowena, R. The individual psychology of Alfred Adler. New York: Basic Books.
- Asher, S., Parkhurst, J., Hymel, S., & Williams, G. (1991). Peer rejection and loneliness in childhood. In S. Asher and Coie (Eds.), Peer rejection in childhood. New York: Cambridge University Press.
- Asher, S., Singleton, L., Tinsley, B. & Hymel, S. (1979). Reliable sociometric measure for preschool children. Developmental Psychology, 15, 443-444.
- Asher, S. & Taylor, A. (1981). Social outcomes of mainstreaming: Sociometric assessment and beyond. Exceptional Education Quarterly, 1, 13-30.
- Brackett, D. & Maxon, A. (1986). Service delivery alternatives for the mainstreamed hearing-impaired child. Language, Speech, and Hearing Sciences in the Schools, 17, 115-125.
- Brunschwig, L. (1936). A study of some personality aspects of deaf children. Contributions to Education No. 687, NY: Teachers College Press, Columbia University.
- Cartwright, D. & Zander, A. (1960). Group dynamics (2nd edition). Evanston, Illinois: Row, Peterson.
- Coleman, J. (1961). The adolescent society. New York: The Free Press.
- Cooley, C. (1909). Social organization. New York: Scribners.
- Cooley, C. (1922). Human nature and the social order. NY: Charles Scribners Sons.
- Coopersmith, S. (1967). Antecedents of self-esteem. San Francisco, CA: W. H. Freeman.
- Coopersmith, S. (1981). Antecedents of self-esteem (2nd edition). Palo Alto, CA: Consulting Psychologists Press, Inc.

- Craig, W. (1965). Effects of preschool training on the development of reading and lipreading skills of deaf children. American Annals of the Deaf, 109, 280- 296.
- Criswell, J. (1939). Social structure revealed in a sociometric test. Sociometry, 2, 69-75.
- Crockett, L., Losoff, M. & Peterson, A. (1984). Perceptions of the peer group and friendship in early adolescence. Journal of Early Adolescence, 4, 2, 155-181.
- Davis, J. (1981). Psychosocial considerations and evaluation. In M. Ross and L. Nobers (Eds.), Educating Hard of Hearing Children. Washington, D.C.: Alexander Graham Bell Association for the Deaf.
- Davis, J. (1986). Academic placement in perspective. In D. Luterman (Ed.), Deafness in perspective (pp. 205-224). San Diego, CA: College Hill Press.
- Davis, J., Shepard, N., Stelmachowicz, P. & Gorga, M. (1981). Characteristics of hearing-impaired children in public schools: Part I, Demographic data. Journal of Speech and Hearing Disorders, 46, 2, 123-129.
- Dengerink, J. & Porter, J. (1984). Children's attitudes toward peers wearing hearing aids. Language, Speech and Hearing Services in Schools, 15, 205-209.
- Douvan, E. & Adelson, J. (1966). The adolescent experience. New York: John Wiley.
- Erikson, E. (1968). Identity, youth and crisis. New York: Norton.
- Evans, A. (1975). Experiential deprivation: Unresolved factor in the impoverished socialization of deaf school children in residence. American Annals of the Deaf, 120, 545-552.
- Farrugia, D. & Austin, G. (1980). A study of social-emotional adjustment patterns of hearing-impaired students in different educational settings. American Annals of the Deaf, 125, 535-541.

- Foster, S. (1988). Life in the mainstream: Deaf college freshmen and their experiences in the mainstreamed high school. Journal of Rehabilitation of the Deaf, 22, 2, 27- 35.
- Foster, S. (1989). Social alienation and peer identification: A study of the social construction of deafness. Human Organization, 48, 226-235.
- Franklin, M., Duley, S., Rousseau, E. & Sabers, D. (1981). Construct validation of the Piers-Harris Children's Self-Concept Scale. Educational and Psychological Measurement, 41, 439-443.
- Ghezzi, P. (1991). Peer acceptance rating scale. Unpublished manuscript.
- Gibson-Harman, K. & Austin, G. (1985). A revised form of the Tennessee self-concept scale for use with deaf and hard of hearing persons. American Annals of the Deaf, 130, 3, 218-225.
- Gillies, J. (1968). Variations in drawings of "a person" and "myself" by hearing-impaired and normal children. British Journal of Educational Psychology, 38, 86-88.
- Gowan, J. (1960). Factors of achievement in high school and college. Journal of Counseling Psychology, 7, 91-95.
- Greenburg, H. & Kusche, C. (1989). Cognitive, personal and social development of deaf children and adolescents. In M. Wang, M. Reynolds, and H. Walberg (Eds.). Handbook of special education: Research and practice. NY: Pergamon Press.
- Harrison, P. (1985). Vineland Adaptive Behavior Scale: Classroom Edition Manual. Circle Pines, Minnesota: American Guidance Service.
- Hartup, W. (1983). Peer relations. In P. Mussen and E. Hetherington (Eds.) Handbook of child psychology: Vol. 4. Socialization, personality, and social development (pp. 103- 196). NY: John Wiley and Sons.
- Holland, T. & Andre, A. (1987). Participation in extracurricular activities in secondary school: What is known, what needs to be known? Review of Educational Research, 57, 437-466.
- Horney, K. (1950). Neurosis and human growth. NY: Norton.

- Hymel, S. (1986). Interpretations of peer behavior: Affective bias in childhood and adolescence. Child Development, 57, 431-455.
- James, W. (1890). The principles of psychology. New York: Henry Holt.
- Jennings, H. (1937-38). Structure of leadership: Development and sphere of influence. Sociometry, 1, 99-143.
- Kandel, D. (1978). Similarity in real-life adolescent friendship pairs. Journal of Personality and Social Psychology, 36, 306-312.
- Koelle, W. & Convey, J. (1982). The prediction of the achievement of deaf adolescents from self-concept and locus of control measures. American Annals of the Deaf, , 769-779.
- Ladd, G., Munson, H. & Miller, J. (1984). Social integration of deaf adolescents in secondary-level mainstreamed programs. Exceptional Children, 50, 5, 420-428.
- Maxon, A. & Brackett, D. (1987). The hearing-impaired child in regular schools. Seminars in Speech and Language, 8, 4, 393-413.
- Maxon, A., Brackett, D. & van den Berg, S. (1991). Self-perception of socialization: The effects of hearing status, age and gender. The Volta Review, 93, 1, 7-17.
- McConnell, S. & Odom, S. (1986). Sociometrics: Peer-referenced measures and the assessment of social competence.
- Meadow, K. (1969). Self-image, family climate, and deafness. Social Forces, 47, 428-438.
- Meadow, K. (1980). Deafness and child development. Berkeley, CA: University of California Press.
- Meadow, K. (1982). Socialization theories: Implications for research with deaf children. In C. Erting and R. Meisegeier (Eds.). Deaf children and the socialization process. Washington, D.C.: Gallaudet College.

- Mertens, D. (1986). Social development for hearing-impaired high school youth. Paper presented at the 1986 annual meeting of the American Educational Research Association, San Francisco, California.
- Mertens, D. (1989). Social experiences of hearing-impaired high school youth. American Annals of the Deaf, 134, 1, 15-19.
- Montemayor, R. & Van Komen, R. (1980). Age segregation of adolescents in and out of school. Journal of Youth and Adolescence, 9, 371-381.
- Moore, D. & Kluwin, T. (1986). Issues in school placement. In A. N. Schildroth & M. A. Karchmer (Eds.), Deaf Children In America (pp. 105-123). Boston: Little, Brown and Company, Inc.
- Moore, D. (1987). Educating the Deaf: Psychology, principles, and practices, 3rd Edition. Boston: Houghton Mifflin Company.
- Moreno, J. (1934). Who shall survive? Washington, D.C.: Nervous and Mental Disease Publishing Company.
- Parker, J. & Asher, S. (1987). Peer relations and later personal adjustment: Are low-accepted children at risk? Psychological Bulletin, 102, 357-389.
- Piers, E. (1984). Piers-Harris Children's Self-Concept Scale, Revised Manual 1984. Los Angeles, CA: Western Psychological Services.
- Piers, E. & Harris, D. (1964). Age and other correlates of self-concept in children. Journal of Educational Psychology, 55, 2, 91-95.
- Reich, C., Hambleton, D. & Houldin, B. (1977). The integration of hearing-impaired children in regular classrooms. American Annals of the Deaf, 122, 534-543.
- Sainato, D., Zigmond, N. & Strain, P. (1983). Social status and initiations of interactions by learning disabled students in regular education settings. Analysis and Intervention in Developmental Disabilities, 3, 71-88.
- Saur, R., Lane, C., Hurley, B. & Opton, K. (1986). Dimensions of mainstreaming. American Annals of the Deaf, 131, 325-330.

- Schlesinger, H. & Meadow, K. (1972). Sound and sign: Childhood deafness and mental health. Berkeley, CA: University of California Press.
- Sheare, J. (1976). The relationship between peer acceptance and self-concept of children in grades 3 through 6 (Doctoral dissertation, Pennsylvania State University, 1975). Dissertation Abstracts International, 36, 7310A-7311A. (University Microfilms No. 76-10, 783, 129).
- Sherif, M. & Sherif, C. (1964). Reference groups. New York: Harper and Row.
- Sparrow, S. Balla, D. & Cicchetti, D. (1985). Vineland Adaptive Behavior Scale, Classroom Edition. Circle Pines, Minnesota: American Guidance Service.
- Stinson, M., Whitmire-Chase, K. & Kluwin, T. (1990). Self-perceptions of social relationships in hearing-impaired adolescents. Paper presented at the 1990 annual meeting of the American Educational Research Association, Boston, Massachusetts.
- Subtelny, J. Orlando, N., & Whitehead, R. (1981). Speech and voice characteristics of the deaf. Washington, D.C.: The Alexander Graham Bell Association for the Deaf.
- Sullivan, H. (1947). Conceptions of modern psychiatry. Washington, D.C.: William Alanson Psychiatric Foundation.
- Thompson, G. & Powell, M. (1951). An investigation of the rating-scale approach to the measurement of social status. Educational and Psychological Measurement, 11, 440-455.
- Titus, E. (1965). The self-concept and adjustment of deaf teenagers. Columbia, Missouri: University of Missouri Press.